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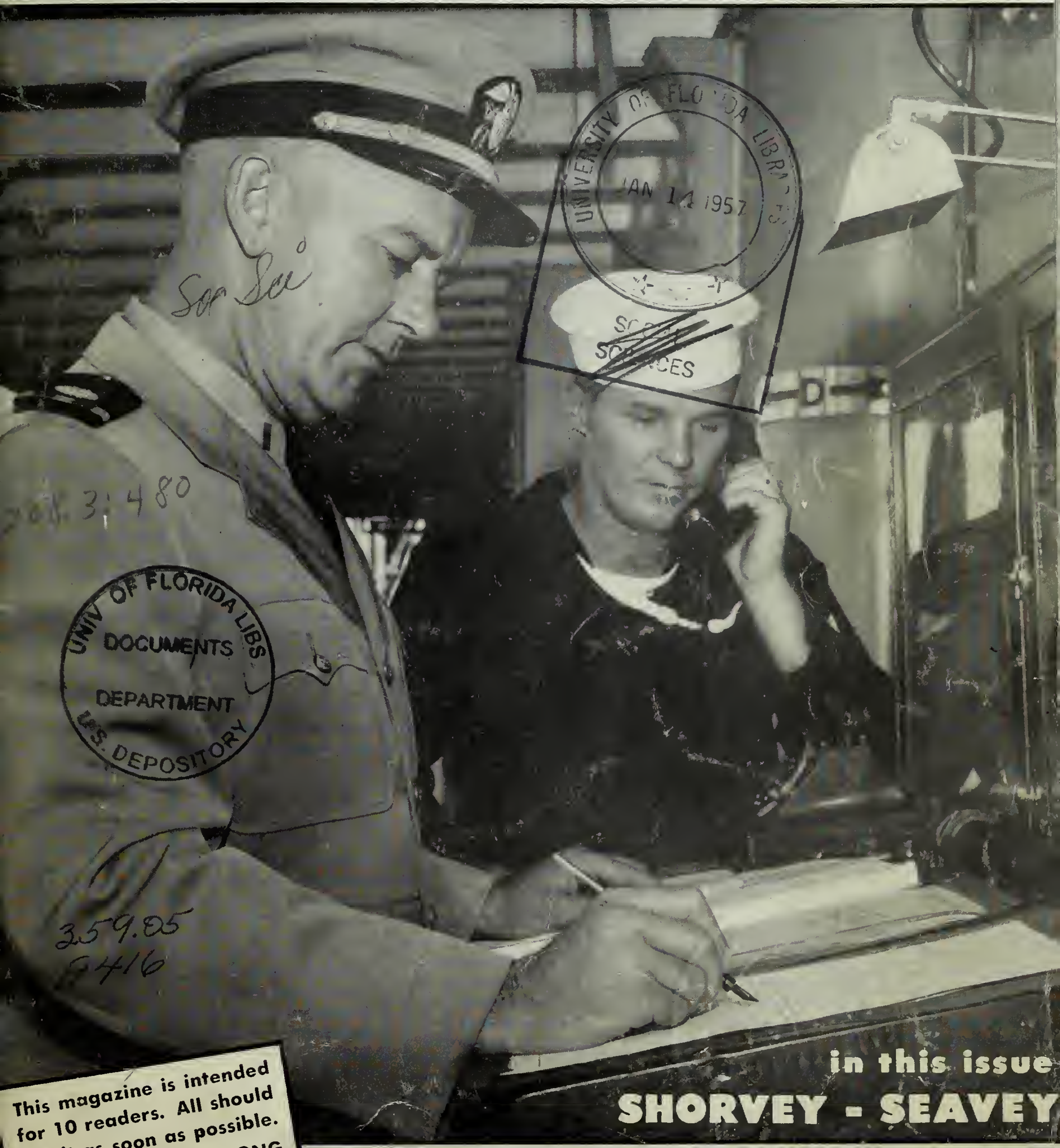
THE BUREAU OF NAVAL PERSONNEL INFORMATION BULLETIN



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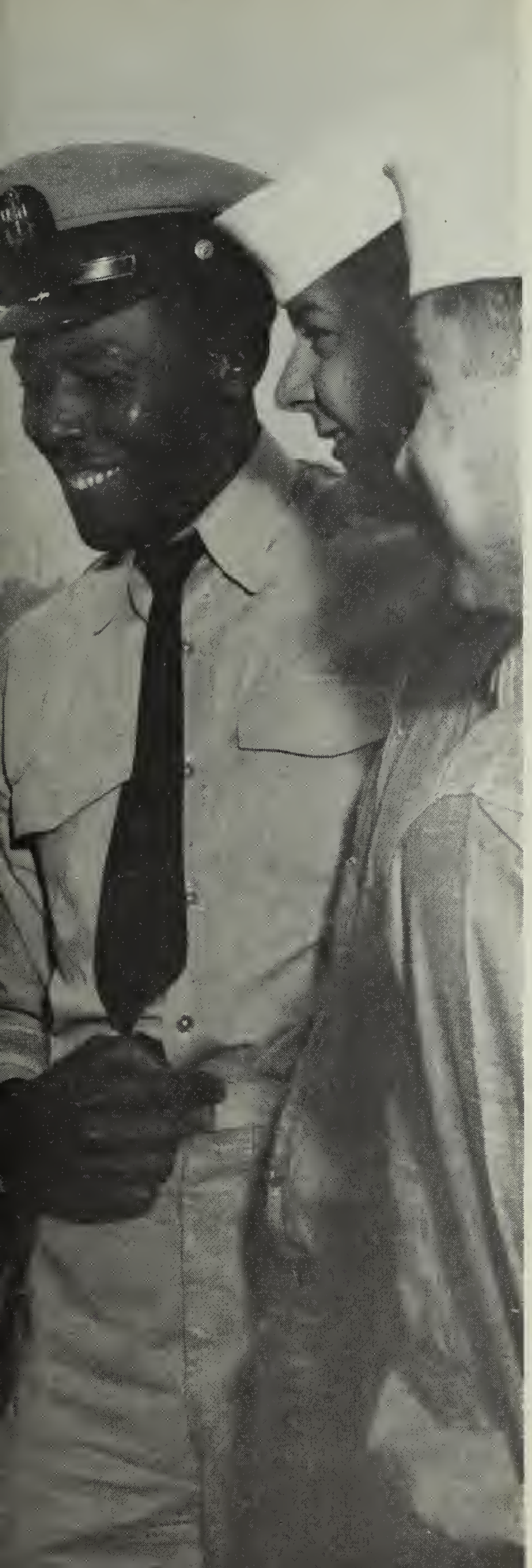

ALL HANDS

THE BUREAU OF NAVAL PERSONNEL INFORMATION BULLETIN

JANUARY 1957 Nav-Pers-O NUMBER 480

VICE ADMIRAL JAMES L. HOLLOWAY, Jr., USN
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- **FRONT COVER: QUARTERDECK WATCH—R. A. Howell, CWO, W-3, USN, and W. A. Hammond, BM3, USN, stand watch on board USS Hamul (AD 20) in port at Long Beach, Calif.**
- **AT LEFT: SUNDAY SESSION—Crew members from USS Hamul and her brood of destroyers chat with LT William C. O'Connell, CHC, USNR, after Mass.**

- **CREDITS: All photographs published in ALL HANDS are official Department of Defense Photos unless otherwise designated.**

A Mobile Navy: Ready, Stead

NOT LONG AGO a symbol passed out of the Navy.

She was USS *Mississippi* (AG 128), whose career extended from World War I to the era of supersonic planes, hydrogen bombs and nuclear propulsion. *Missy* was the Navy's oldest combat ship, but she was a lot more than a mere relic, for in her final role as a guided missile test ship she was a symbol of the entire Navy — a Navy that's combining the past with the future to create the biggest change in seapower since steam replaced sail.

Almost every day, in words like these, newspapers and magazines tell the story of that change:

"NAVY LAUNCHES SECOND NUCLEAR SUB"

"NEW SEAPLANE REFUELS FOUR JETS AT ONCE"

"THIRD NEW ATTACK CARRIER LAUNCHED BY NAVY"

"ATOMIC CARRIER SEEN BY 1961"

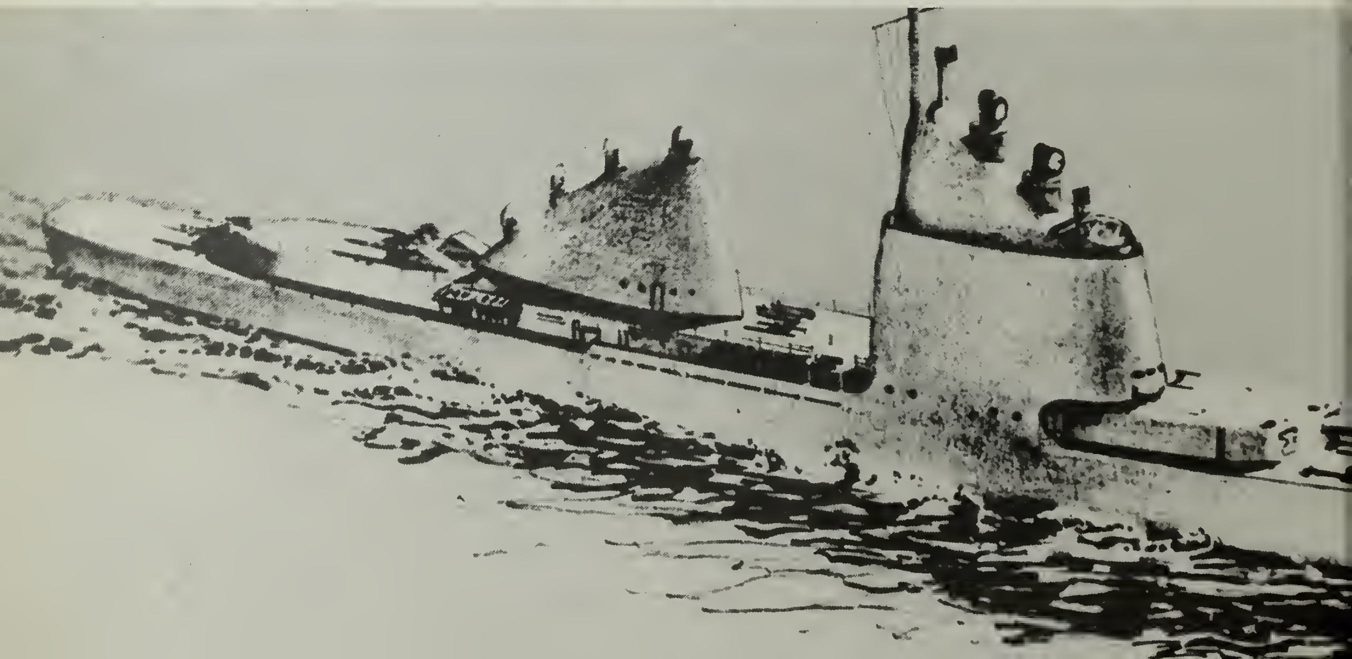
"NAVY *Crusader* TOPS 1000 MPH TO TAKE THOMPSON TROPHY."

Yet, the Navyman in the midst of all this is in about the same position as the giant who doesn't know his own strength or the fellow who can't see the forest for the trees. Since the Navy's progress is spread out through the whole Fleet, it's hard for the man who only sees part of it to realize just how rapidly the Navy of the future is approaching.

As a matter of fact, it's not merely approaching — in many respects it's already here. Just look at some of the things that have been accomplished in the past few years, or which are in the works right now:

• **Nuclear Propulsion**—USS *Nautilus* (SS(N) 571), the world's first atomic ship, is now an "old-timer" with more than two years in commission and some 50,000 miles and more than 500 dives in her log. Besides her, we have a total of 14 more nuclear subs, either built or being built, plus an atom-powered guided missile cruiser in the preliminary stages. In addition, the Navy is de-

GUIDED MISSILES give Navy ships and planes great striking power. (Left) Artist conception of missile cruiser.



- and Fast

veloping atom-powered sea-planes, and by the early '60s all major combatant ships authorized for construction may be atom-driven.

With nuclear propulsion, man comes close to achieving the age-old dream of perpetual motion. Conceivably, an atom-powered ship could remain at sea throughout an entire war, and the range of nuclear aircraft would be limited only by the crew's endurance. Space now used for fuel storage can be converted for stocking other supplies and huge strings of tankers, such as those which kept our fast carrier task forces going in World War II, would no longer be necessary in an atom-powered Fleet with atom-powered planes.

- ***Aircraft Carriers*** — USS *Forrestal* (CVA 59) and *Saratoga* (CVA 60), the biggest carriers in the world, have both joined the Fleet. *Ranger* (CVA 61) has been launched; work on *Independence* (CVA 62) and *Kitty Hawk* (CVA 63) is well under way; and the shipbuilding program for fiscal year 1957 includes a sixth new attack carrier.

These hard-hitting heavyweights and their planes, capable of delivering atomic bombs, are the core of our new Navy's striking power.

LARGE MODERN carriers like *USS Forrestal* (CVA 59) provide mobile air stations at sea, giving the latest in Navy jets great potential striking power.

(Rt) night launching from stern.

NUCLEAR PROPULSION, already here in *USS Nautilus* (SS(N)571), will power Navy ships in near future. Proposed missile sub above will be atom-powered.

They're so far advanced that even the development of nuclear propulsion for surface ships will not render them obsolete. They can roam the seas, ready for action in big wars or small, without any of the logistic problems involved in setting up bases in foreign countries. Their planes and missiles can cover an area of three-and-a-half million square miles. They can move hundreds of miles in a matter of hours to hit new objectives and make themselves tough for the enemy to find. And, even if they're spotted the protection of ships, planes, guns and missiles would make them mighty difficult targets to attack.

Our older flattops are keeping up with the times too. Most of the CVAs in the USS *Midway* (CVA 41) and *Hancock* (CVA 19) classes have been given angled decks, mirror-landing systems and steam catapults to extend their usefulness as far into the future as possible. The smaller carriers have taken on new roles in anti-submarine warfare, helicopter assault and other phases of the possible warfare of tomorrow.

- ***Aircraft***—Many of the planes and helicopters of tomorrow are also here today.

Renewed emphasis is now being placed on the seaplane and its tender in the aviation picture. The big, versatile *Tradewind*, for example, can be used as a "flying LST" or as a tanker capable of refueling four jets at once.

Some aviation experts visualize seaplanes as the first nuclear-powered aircraft, since they could be tested far from populated areas

HARD-HITTING frigates like *USS Norfolk* (DL 1) are part of tomorrow's Navy in Fleet today. *Right:* Navy VTO aircraft offer many potentials with the Fleet.

where a crash or explosion might be disastrous, and since the sea would offer an unlimited runway for a plane laden with heavy reactors and shielding equipment. Seaplanes are also important from the standpoint of flexibility and economy, because they require no airstrips and can take off or land in a much greater area of the world than land-based aircraft.

Additions to our carrier airpower now (or soon will) include planes like the F8U *Crusader,* F11F *Tiger,* A4D *Skyhawk,* FJ4 *Fury,* F4D *Skyray,* F5D *Skylancer,* A3D *Skywarrior,* F3H-2N *Demon* and F9F-8P photographic version of the *Cougar.* The *Crusader* was clocked at over 1015 mph when it won the Thompson Trophy for the Navy the first time the Navy ever entered that event. The *Skyhawk,* an attack bomber smaller than many fighters, holds the world speed record for the 500-kilometer closed course and the rest have all turned in spectacular performances at their own particular specialties. Records are being broken nearly every day in one field or another.

Our airborne anti-submarine warfare is also keeping up with the times through new and improved equipment for detecting, locating and destroying subs. This mission is still assigned to squadrons of P2V landplanes, P5M seaplanes, S2F carrier-based aircraft, HSS helicopters and ZPG and ZS2G airships. These aircraft aren't entered in the race for speed, but they are leading the pack in total increase in electronics equipment.

In the experimental field there are the hydro-ski equipped *Sea Dart,* (world's first supersonic seaplane), the *Pogo* vertical take-off fighter and the one-man "Flying Platform" developed by the Office of Naval Research.

- **Guided Missiles** — It may be a long time before guided missiles replace the Navy's big guns, but these flying killers are definitely here to stay. In fiscal year 1957 last year's level of expenditure for conventional ammunition was cut almost one fourth to allow 247 million dollars more for guided missiles.

Regulus I, a versatile surface-to-surface missile capable of delivering nuclear payloads, has been in quantity production for several years. Submarines, cruisers and aircraft carriers of both the Atlantic and Pacific Fleets are capable of launching it. A more advanced type, *Regulus II* has also been flown successfully in tests.

In air-to-air missiles the lightweight *Sparrow I* and *Sidewinder* are now operational. *Sidewinder* requires a minimum of moving parts and contains no more electronic components than an ordinary radio, thus making it possible for Navymen to handle and assemble it without

HELICOPTERS AND MISSILES have important roles in future Navy. *Below:* Navy jet pilot in pressure suit stands by latest air-to-air missile, *Sidewinder.*

undergoing any specialized technical training.

One supersonic surface-to-air missile, *Terrier,* stands ready now to help defend the Fleet as the Sunday punch of USS *Boston* (CAG 1) and *Canberra* (CAG 2). Two more weapons in the same class, *Tartar* and *Talos,* are well along in the development stage. *Tartar* is a smaller version of *Terrier* for ships of destroyer size and the secondary batteries of large ships. *Talos* is bigger than *Terrier* and has a longer range.

For air-to-surface use we have *Petrel,* in service today as armament for patrol aircraft. This missile permits a pilot to attack enemy ships below the waterline while still remaining well out of range of the target's air defense.

Meanwhile, the work continues on such things as missiles to use against missiles and intercontinental and intermediate-range ballistic missiles. (A ballistic missile is powered for only the first five or 10 per cent of its flight, after which it "falls" toward its target in the trajectory of an artillery shell. Aerodynamic missiles, like *Regulus, Terrier, Talos* and *Petrel,* are propelled by their engines all the way from launching site to target.)

- **Submarines** — Nuclear propulsion isn't the only new development in the "silent service."

The dirigible-shaped hull pioneered by USS *Albacore* (AGSS 569) will give our subs more underwater speed and maneuverability than ever before. Coupled with atomic power, the *Albacore* hull means a revolution in our undersea craft. Six of them are provided for in the BuShips budget for FY '57.

In addition, our hunter killer, radar picket and guided missile subs (like the *Regulus*-firing USS *Tunny* (SSG 282) and *Barbero* (SSG 317) have taken on important new tasks in today's Navy of tomorrow.

- **Cruisers**—The biggest developments in this ship type are of course, the plans for the world's first atom-powered surface ship and the switch to guided missiles. The nuclear cruiser, along with its innovations in propulsion and armament, will incorporate radical changes in design, including a superstructure which looks almost like that of a submarine.

Two CAGs, *Boston* and *Canberra,* are already in the Fleet and five CLGs are provided for in the '57 conversion program. Of the latter, three will be equipped to launch *Terriers* and two will be armed with *Talos.* USS *Galveston* (CLG 93), scheduled to join the Fleet early next year, will be our first *Talos*-armed cruiser.

The tactical command ship, designed to serve with a fast carrier task force or in amphibious operations, is another ship of the future among the cruiser types. The first of them, USS *Northampton* (CLC 1) has been in commission for almost four years.

- **Frigates**—DLs, big enough to be rated as light cruisers in many countries, are also part of "tomorrow's Navy today." Armed to the teeth against either subs or planes, these ships are an important addition to the fast attack forces of tomorrow. Five of them have been commissioned since 1953.

The importance of the frigate in future plans is evident from the appropriations. Six new guided missile frigates were included in the shipbuilding funds for FY '56 and there were four in the '57 program. Equipped with both 5"/54s and dual launchers for the *Terrier,* the new DLGs really pack the gear.

- **Destroyers** — Conversion and new construction are bringing about so many changes among DD and DE types that it's a hard job to keep up with all the developments.

Our first full-fledged guided missile destroyer, USS *Gyatt* (DDG 712), has been commissioned, eight new DDGs are in the FY '57 plans, 18 modern destroyers in the *Forrest Sherman* (DD 931) class are built or being built and converted DDs and DEs are joining our radar picket defenses in ever increasing numbers.

And so on—from World War II Liberty ships becoming YAGRs to the building of new landing craft, changes are taking place everywhere. For example one of the items in the '57 plans is the prototype of a 30-knot hydrofoil landing craft to replace the old eight-knot LCMs.

But, the ships, planes and missiles mentioned here are just samples of our progress. And, despite all that's been accomplished so far, there's still a lot more to do.

Modernization of our older ships is all right for the present, but we can't go on converting World War II ships forever. In carriers, for instance, only *Forrestal* and subsequent types will be able to handle the Mach 2 fighter planes we expect to have available by 1960. After that the converted *Midway* and *Hancock* class carriers of today will be outmoded as first-line attack carriers.

Therefore, we've embarked on a long-range rebuilding program which will probably be going on for years. Behind it is the firm conviction that a fast-moving, hard-hitting Navy is more important to the United States than it has ever been before.

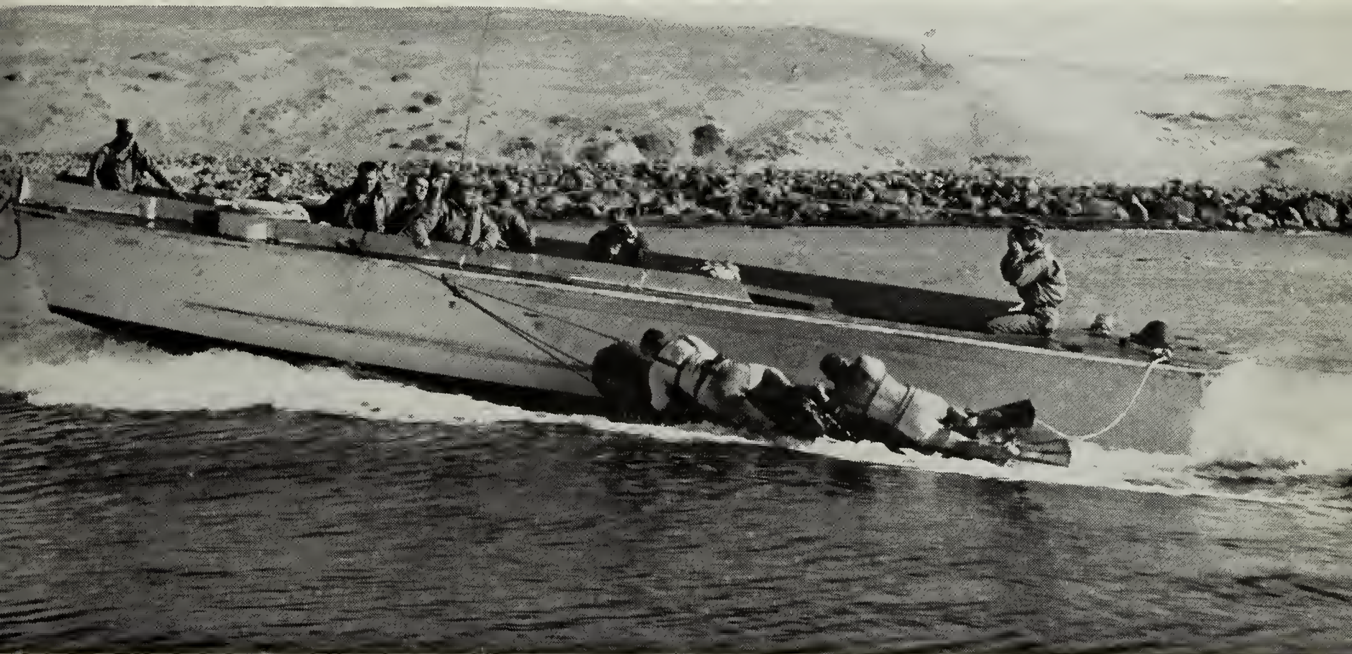
Without such a Navy, America's international alliances would be almost useless; our sources of strategic materials like manganese, chrome, tin, rubber, bauxite and cobalt would be endangered; our ability to keep our overseas bases manned, equipped and supplied would be almost crushed; and the seas that wash our shores could become invasion highways for an aggressor bent on domination of the world.

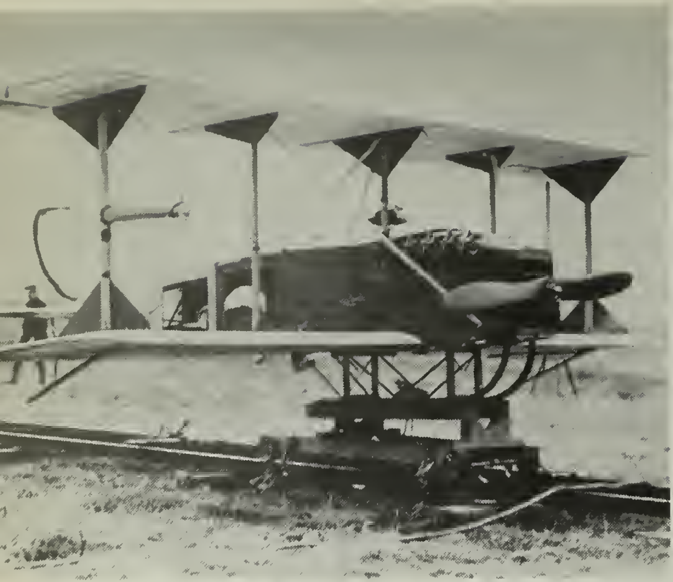
To see that those things don't happen the new Navy is also taking into the future the traditions and spirit of the past—the same traditions and spirit that have made great ships of USS *Mississippi* and hundreds of others before her.

—Jerry Wolff

FUTURE UNIFORMS will help Navymen do their jobs with greater safety. DC men wear protective gear on the job during training maneuvers at sea.

CHANGING TACTICS create new roles for Navymen. Here, frogmen 'drop in' for beach invasion practice.





NAVY MISSILES have come a long way since World War I 'flying torpedo' (left) and the *Bat* of World War II (right).

U. S. Navy Missiles

BACK IN 1898 LT Bradley Fiske, USN, applied for a patent on an apparatus to steer torpedoes by radio. The device wasn't very practical and it traveled through water instead of air. However, it might be called a forerunner of the guided missile, since it was one of the first real attempts at guiding a projectile to its target by remote control.

During World War I the Navy worked on a pilotless plane to be used as a "flying torpedo," but it wasn't until 1936 that the program which turned out the Navy's first really successful radio-controlled, pilotless aircraft was begun.

World War II saw the launching of a number of guided missile programs, and in the last year of the war the Navy came up with its first fully automatic guided missile to be used in combat. This was the *Bat*,

MODERN CARRIERS and planes carry missiles. Above: *Demon* with *Sparrows*. Below: *USS Randolph* with *Regulus*.

PETREL-PACKING *Neptune* (left) and *Sidewinder*-slinging *Cougar* (right) add new sting to the Navy's air punch.

rom Then to Now

a glide bomb released by patrol bombers against enemy shipping with considerable effectiveness. The *Bat* was "briefed" on its objective by the mother plane and after release, this missile could follow a moving target through extensive maneuvers with the aid of its own radar installations.

In the postwar decade our missile muscle has grown tremendously.

Today, among the Navy missiles revealed to the public there are weapons in the surface-to-surface, surface-to-air, air-to-air, and air-to-surfaces classes. And, we have carriers, cruisers, submarines, destroyers and aircraft capable of delivering them.

As you can see from the pictures on these pages, the guided missile has come a long way since the days of LT Fiske, and there's a lot more still to come.

SIGNS OF THE TIMES in a new Navy are ship-launched missiles like *Terrier* (left), *Regulus* (right) and *Talos* (above).

THE WORD

Frank, Authentic Advance Information On Policy—Straight From Headquarters

• **PROFESSIONAL EXAMS FOR WOs** — There will be no professional examinations for promotion of warrant officers until fiscal year 1959, according to BuPers Notice 1416 of 6 Nov 1956.

The *Manual of Qualification for Warrant Officers* (NavPers 18445) has been written and will be distributed this month. An examination study plan, based on this manual, is under development and will be distributed later in the year.

The date for the first professional exams for warrant officers will permit one year of preparation before administration of the first examinations. The examination requirements will be phased in gradually over a period of years so as to permit an orderly completion of courses necessary to earn exemptions.

• **USNRs GOING USN** — Here is the latest list of "open rates" in which Naval Reserve personnel on active duty may submit application to the Bureau for enlistment or reenlistment in the Regular Navy in the pay grade held.

If you're a Naval Reservist on active duty for 12 months or more, serving in one of the open rates (or a related emergency service rate), you may apply to the Chief of Naval Personnel (Attn: Pers B223) via your commanding officer for change from USNR to USN in the same pay grade.

The rates listed as "open" include the following:

Chief: RD, SO, RM, IC, CE, BU, AQ, and AE.

First Class: RD, SO, GS, RM, CT, DM, MU, MM, MR, BT, EM, IC, SV, CE, BU, AT, AQ, AC, AE, and AG.

Second Class: QM, SM, RD, SO, TM, GS, FT, ET, OM, RM, CT, YN, MA, SK, DK, JO, DM, MU, MM, EN, MR, BT, EM, IC, ME, PM, SV, CE, BU, UT, AD, AT, AQ, GF, AC, AE, AM, PR, AG, and TD.

Third Class: Same ratings as for Second Class.

If you're a Reservist interested in going Regular, and hold an eligible rating, consult BuPers Inst. 1130.4C (Ch 3), for full particulars. For other info on open rates see BuPers Notice 1130 of 16 Nov 1956.

• **EUROPEAN DEPENDENT PROBLEMS**—Navymen looking forward to a tour in the European area had better think twice before making plans that involve dependents. Shortages resulting from the current international situation may make living conditions quite uncomfortable.

Here's the situation at press time:

• Except in Germany and parts of Italy, gasoline for privately owned vehicles is provided through private dealers or distributors. In several countries restrictions are already imposed upon retailers and consumers, and they could affect you.

• Fuel oil and other fuel for heating may be controlled or rationed, so the fuel oil pinch may be felt if you depend upon the usual supplementary space heaters, as most of them are oil burners. France and England are most seriously affected.

• A critical coal shortage exists in France. Several months' delay may be expected in filling orders.

• Panic buying of non-perishable foods has caused some local shortages. If you buy most of your supplies through the commissaries you will have little difficulty in this respect. If not, you will have to take your chances.

With reference to motor and heating fuels, bear in mind that, because you are used to a much higher consumption rate than most Europeans, any rationing plan will probably affect you pretty severly.

Take your family if you want to, but don't say you weren't warned.

• **OFFICER FLIGHT TRAINING** — Commissioned officers in the Regular Navy and Naval Reserve and those officer candidates whose training will lead to a commission in the line, may now apply for heavier-than-air flight training.

Basic requirements are that applicants must be less than 26 years of age at time of application, have successfully finished at least four semesters of undergraduate work at an accredited college or university, be physically qualified and aeronautically adapted and should not have been previously separated from any Army, Navy or Air Force flight training program except by reason of being temporarily physically disqualified. Also, candidates must make a score of at least three in both the Aviation Qualification Test (AQT) and the Flight Aptitude Rating (FAR).

In addition, Regular officers (other than NROTC) must sign an agreement not to resign during flight training and to serve on active duty for two years after being designated naval aviators. This period will be in addition to previously acquired obligated service.

Naval Reserve and NROTC officers must agree to serve on active duty in the Regular Navy and/or Naval Reserve for two years after being designated naval aviators, unless sooner released by the Navy. Complete information may be found in BuPers Inst. 1520.20A.

KEEP THIS IN MIND—There are nine other Navymen who want to read this issue. *PASS THIS COPY ON.*

DIRECTIVES IN BRIEF

This listing is intended to serve only for general information and as an index of current Alnavs and NavActs as well as current BuPers Instructions, BuPers Notices, and SecNav Instructions that apply to most ships and stations. Many instructions and notices are not of general interest and hence will not be carried in this section. Since BuPers Notices are arranged according to their group number and have no consecutive number within the group, their date of issue is included also for identification purposes. Personnel interested in specific directives should consult Alnavs, NavActs, Instructions and Notices for complete details before taking action.

Alnavs apply to all Navy and Marine Corps commands; NavActs apply to all Navy commands; BuPers Instructions and Notices apply to all ships and stations.

Alnavs

No. 58 — Announced certain restrictions regarding the display of guided missiles and associated equipment. Stated that new weapons and experimental aircraft would not be displayed without specific approval.

No. 59 — Announced approval by the President of the report of a selection board which recommended Regular Marine Corps and Marine Corps Reserve officers for temporary promotion to grade of major.

No. 60 — Announced the convening of selection boards to recommend USN and USNR staff corps officers for promotion to lieutenant commander and lieutenant.

No. 61 — Announced approval by the President of the reports of selection boards which recommended USN and USNR men officers for temporary promotion to lieutenant commander and USN women officers for permanent promotion to lieutenant commander and lieutenant.

Instructions

No. 1416.4A — Describes a plan for the determination of professional fitness for promotion of active duty USNR officers.

No. 1440.5B — Promulgates instructions relating to changes in rate and rating of enlisted personnel.

No. 1440.10A — Announces additional instructions regarding procedures for conversion of aviation electronicsmen (AL) to aviation electronics technician (AT) and to extend for two years the terminal date for making this change in rating.

No. 1750.1B — Explains the provisions of the Uniformed Services Contingency Option Act of 1953 as it applies to naval personnel and sets forth the procedures and conditions connected with election of the annuities available under this act.

No. 1710.1D — Establishes basic policies and procedures governing conduct of the All-Navy and Inter-Service Sports Championships.

No. 5321.2B — Promulgates revised instructions applicable to officer and enlisted allowances and complements.

Notices

No. 1650 (22 October) — Announced the names of USMC units which were awarded the Presidential Unit Citation and Navy Unit Commendation.

No. 1420 (24 October) — Announced the dates of rank of certain officers of the Medical Corps and Dental Corps.

No. 1416 (6 November) — Provided information concerning examinations to determine professional fitness for promotion of warrant officers.

No. 1430 (8 November) — Contained information regarding advancements resulting for the August 1956 examinations and the opportunities for advancement which it is estimated will result from the November 1956, February and May 1957 examinations.

No. 1520 (13 November) — Announced the selection of officers for the submarine school class convening in January at the Submarine School, New London, Conn.

No. 1133 (14 November) — Announced Change No. 2 to BuPers Inst. 1133.8, which is concerned with reenlistment in the Regular Navy or voluntary retention on active duty of inducted personnel.

No. 1111 (15 November) — Announced the annual nationwide competitive examination for appointments to cadetship in the U. S. Coast Guard.

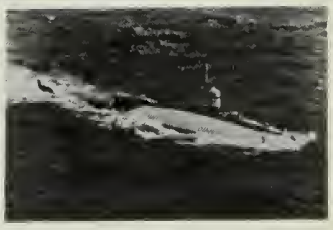
No. 1130 (16 November) — Announced Change No. 3 to BuPers Inst. 1130.4C, which is concerned with enlistment or reenlistment in the Regular Navy of Naval Reserve personnel serving on active duty.

No. 1510 (26 November) — Announced Change No. 1 to BuPers Inst. 1510.67, which is concerned with the local administration of enlisted correspondence courses for active duty personnel.

No. 1001 (29 November) — Announced Change No. 2 to BuPers Inst. 1001.21, which is concerned with retention on active duty and recall of enlisted Naval Reserve and Fleet Reserve personnel.

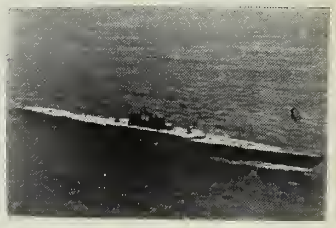
QUIZ AWEIGH

The submarine forces have always been a very strong, but silent, fighting arm of the U. S. Navy. Let's take a look into the submarine forces of today and yesterday to find out how much you know about them.



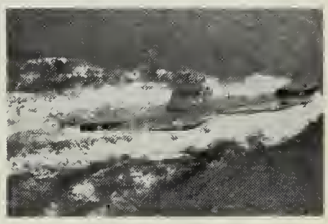
1. Here's a picture of a submarine that has the shape of ships to come. Look closely and you'll see that it is the (a) USS *Nautilus* (b) *Albacore* (c) *Seawolf*.

2. One of the outstanding features of this submarine is (a) it has a tear-drop shape and single screw (b) it has an atomic-powered engine (c) it has a tear-drop shape and twin screws.



3. The present-day namesake of this submarine has been in the news quite often during the past years. Her name is (a) USS *Tang* (b) *Wahoo* (c) *Nautilus*.

4. This submarine is among the three largest ever built by the U. S. to date. She belongs to the (a) *Narwhal* class (b) *Balao* class (c) *Tang* class.



5. A quick glance will tell you that this is the K-3 submarine. But do you know her name? She is the (a) *Bonita* (b) *Bass* (c) *Bream*.

6. There are three of this type of submarine. Each is 195 feet long and is manned by a crew of (a) 78 (b) 47 (c) 65.

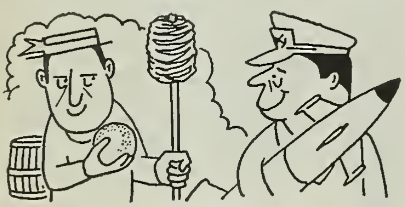
You'll find the answers to this month's quiz on page 63.

Warrant Office

“A DIFFERENCE? Of course there's a difference—in insignia and my monthly pay,” says Jonathan Dowe, Warrant Officer, USN. “Add one to my sleeve and the other to my check and you couldn't tell me from an LDO. I'd still be doing the same job.”

Is he right? Do Warrant Officers do the same work, fill the same billets but draw less pay than Limited Duty Officers? For that matter, what *is* a Warrant Officer? Is the warrant officer category necessary in today's Navy, or is it a relic left over from ancient history?

Similar questions have been asked for years but no one quite knew how to answer them. Warrant officers themselves have been uncertain about their status. There has been even more uncertainty about the status and duties of the limited duty officer, which came into being under the Officer Personnel Act of 1947 (61 Stat. 795, as amended). Even before there were LDO categories to complicate the question, the status and duties of warrant officers were never made clear.



They are now. For the first time in the history of the Navy, a *Manual of Qualifications for Warrant Officers* (NavPers 18455) has been published for release and distribution in January 1957. (A similar project for limited duty officers is nearing completion and should be released at a later date.)

At last, bewildered warrants, personnel officers or enlisted ratings working toward warrant status can find the qualifications required for each category, and plan accordingly.

One of the questions most frequently asked is “What's the difference between a warrant and a commission?”

Briefly, a warrant is an instrument conferring authority upon persons but is on a level not as high as a commission. Outside of military terminology, however, the two do have essentially the same meaning. As used in the Navy, the “commission” is a paper signed by the Secretary of the Navy for the President with the advice and consent of the Senate. The “warrant” is signed by the Secretary of the Navy for the President without reference to the Senate.

Historically, the warrant rank predates the U. S. Navy. An appreciation of its evolution may give a better understanding of its present significance. Of the pre-Revolutionary War warrant officers only three categories remain today—Boatswain, Gunner and Carpenter—and even these have been broken down into more specialized categories.

The changes in Gunner illustrate the development of most warrants. For many years, the Gunner was able to keep up with all technical advances in naval ordnance. At first, the guns, powder and projectiles were relatively primitive. As these improved more and more technical knowledge was demanded. Then, with the appearance of new weapons such as torpedoes, mines, bombs and early rockets the ordnance field figuratively exploded.

This evolution of naval ordnance forced a division of the areas of specialized knowledge and skills. Qualifications required in each area became more precise until today, the Gunner specialties are divided among five technical warrant categories: Aviation Ordnance Technicians; Ordnance Control Technician; Underwater Ordnance Technician; Surface Ordnance Technician; and Mine Warfare Technician. The knowledge and skill demanded of a warrant officer in any one of these areas are many times greater than that, say, of the Gunner of 1864.

When it became necessary for the Colonies to prepare for sea warfare the Continental Congress provided for the purchase and construction of ships. The following ranks were to man them:

Commissioned — Captains and Lieutenants.

Warranted — Surgeons, Pursers, Boatswains, Gunners, Carpenters, Master's Mates, Chaplains, and Secretary of the Fleet (a clerk for the Commander-in-Chief of the Fleet).

Petty Warrants — Midshipmen, Captain's Clerks and Surgeon's Mates.

Status of the various officer ranks of the early U. S. Navy often changed. Chaplains and surgeons were sometimes listed as warrant officers, at other times they were not. The billet of “Surgeon's Mate” was listed in turn under the headings of officer, warrant officer, petty officer and commissioned officer.

Despite the lack of uniformity, and the uncertainty of status, the history of the warrant rank shows that it has always been a rank of specific *technical knowledge*.

So much for the confusion, uncertainty and evolution of the warrant officer. Let's get back to the present.

The new *Manual of Warrant Officer Qualifications* states: “The role of the Warrant Officer in the career structure of the U. S. Navy is that of an administrative and technical specialist in a prescribed occupational area. His career pattern provides for increasing administrative

and executive responsibilities as he advances to commissioned warrant status."

The *Manual* defines the qualifications needed in each occupational area, the academic work necessary, and the experience pattern that should be followed. Through its use, it will be possible to have better competitive examinations and a more effective training program in each category. With better understanding of the qualifications, warrant officers will be utilized to greater advantage for their own benefit and for the needs of the service.

The differences between warrant officer and limited duty officer qualifications and duties will be more clearly defined with the publications and distribution of the *Manual* for warrants, but it will be definitive when the *LDO Manual* reaches the distribution stage. The differences will be reflected in abilities, assignment patterns and responsibilities—not just in time in service, insignia and pay check.

In the *Manual* you will find that there are 24 categories—from Boatswain to Bandmaster—with definite qualifications requirements in each category for satisfactory performance in billet assignments appropriate to that specialty.

The *Manual* specifically sets forth the general qualifications which must be met by all warrant officers. There are, for example, 18 General Performance Items. As a sample, No. 6 says: "Manage a division quarterly allotment, and control utilization of materials within the allotment." Number 16 requires that you: "Identify major types and classes of United States naval ships and aircraft."

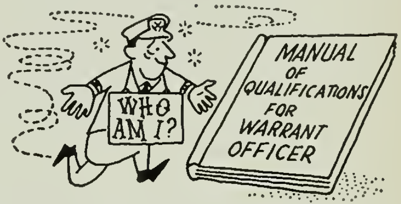
In addition, under the general WO qualifications section, there are 33 academic requirement items. Keep the word "know" in mind as you read No. 7, which states: "Procedures for preferring charges in accordance with the Uniform Code of Military Justice and content and scope of articles 15, 31, 133, 134 and 137." Number 19 requires that you know: "principles and techniques of leadership with respect to: (1) motivation of personnel; (2) maintenance of morale; (3) individual example of bearing and manner; (4) acceptance of responsibility and delegation of authority." To meet the requirements of No. 27, you must know: "General shipboard and small boat safety precautions; general safety regulations for working in the vicinity of aircraft."

Professional qualifications for each of the 24 categories have individual sections covering, in detail, the requirements for each specialty. To take one at random, Construction Electrician (759):

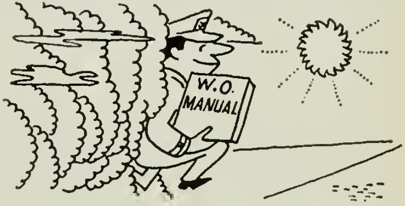
"Construction Electricians are technical specialists in the field of electricity. They serve as assistants to commanding officers and officers in charge of units of the naval construction forces, public works officers, and officers in charge of construction, and may serve as officers in charge of detachments. They provide technical advice and information concerning uses, capabilities, limitations, and reliability of lighting, power distribution, and telephone systems and equipment; analyze, solve, and correct electrical operational and maintenance problems; and supervise and direct installing, operating, testing, maintaining, and repairing of lighting, power distribution, and telephone systems, and related equipment. They develop and supervise training programs; supervise preparation and maintenance, and submission of personnel and material records and reports; and supervise procurement, stowage, preservation, and utilization practices for electrical equipment and repair parts."

How does a WO differ from a CPO? In most instances, the warrant categories stem from more than one enlisted rating. While a chief petty officer is responsible for qualifications in one rating only, the warrant officer has administrative and technical duties and responsibilities for training subordinates that are much greater and cover much broader areas.

And how does a WO differ from an LDO? There is also a big difference between the functional areas in which warrant officers and limited duty officers operate. The WO is usually restricted to assignment in his specialty and is not normally expected to assume command duties except in certain emergencies when a warrant officer of the line may succeed to command. A limited duty officer is often expected to broaden his qualifications beyond his specialty and to assume many collateral duty assignments traditionally associated with officers of the line. He may be responsible for an occupational area equivalent to an area covered by two or more warrant officer categories. It is comparable to the difference between the areas of a CPO and a WO. The scope of the Ordnance LDO, for example, encompasses that of Surface Ordnance Technician, Ordnance Control Technician, Underwater Ordnance Technician and Mine Warfare Technician. He has, to some extent, moved into the general area coverage of the early day Gunner.


WHO AM I?
MANUAL OF QUALIFICATIONS FOR WARRANT OFFICER

There are, however, four warrant categories not included within the occupational area of any LDO category. These are Bandmaster, Photographer, Medical Service Warrant, and Dental Service Warrant.



Today, Jonathan Dowe, Warrant Officer, USN, can see for himself the qualifications requirements for his specialty spelled out. He can check the differences between those and the new ones he will have to satisfy if he becomes an LDO. If he desires broader responsibilities, an addition to his pay, and greater challenge, he is in line to compete for a limited duty officer commission, provided, of course, he is otherwise qualified.

Seagoing Service Station

SHOPS BEGRIMED by countless man-hours of repair work, ships characterized by spaces alien to the Navy's ordinary man-o-war's-man—these are the very heart of USS *Hamul* (AD 20) and a group of sister tenders who specialize in keeping a large part of the Navy's fighting forces, be they men or ships, in top fighting form.

Hamul, as most Pacific Fleet sailors know, is one of the destroyer tenders serving the Fleet. Some of those on board her will tell you that she's a mistake from the name on her stern right on forward to her eyes, while milder ones are content to call her "sort of left-handed for a Navy ship." Those accustomed to the sleeker silhouettes of carriers, cruisers or "tin cans" are likely to find her profile cluttered.

With the men who know ships best, however, *Hamul* is a workhorse of a different color: her senior first class and chief petty officers seem to be pretty well agreed that AD 20's current status may be summed up by the classic "good officers and crew, good chow and good liberty."

Originally built for the U. S. Maritime Commission, *Hamul* was laid down at Kearny, N. J., as SS *Sea Panther,* hull number 164. The 16,000-ton, 492-footer went into operations as SS *Doctor Lykes* and made runs in both oceans before being taken over by the Navy and commissioned as a cargo ship (AK) in June 1941.

Renaming was in order when the Navy decided to commission the ship—and from this action grows the story that *Hamul* is the only ship with a misspelled name. AKs are customarily named after astronomical bodies or counties in the U. S., and apparently "Hamul" was intended to be "Hamal," a star of the second magnitude in the constellation Arietis. The letter recommending the name spelled it "Hamul," however; so that's the way it was approved by the Secretary of the Navy, and the way it has been ever since.

As AK 30, *Hamul* pulled duty in the initial occupation of Iceland, as a camouflage experiment ship, as a member of a convoy equipped to establish a base in the Pacific's Society Island group. Then, in May 1942, AK 30 entered a shipyard for conversion to destroyer tender.

Placed in full commission as AD 20 in December 1942, *Hamul* has been pulling duty around the Fleet ever since—so continuously in fact that the anonymous author of a

RUGGED AND READY—DDs and DD men of AD 20's briny brood are kept battle-ready through services provided by tender's hard-working crewmen.

shipboard history makes the laconic statement that *Hamul* in 1954 "spent her first Christmas in the States since 1947"—and until this year she hasn't had another chance at Stateside Christmas festivities.

A casual ramble around her weather decks is likely to give a cruiser or BB man the impression that *Hamul,* currently moored to a buoy in Long Beach, is a lazy-type ship, although you'll usually find a few men chipping paint here and there, perhaps a garbage detail on the fantail and a handful of bluejackets performing other tasks. Even her "nest," consisting of USS *Walke* (DD 723), *Ernest G. Small* (DDR 838) and *Harry E. Hubbard* (DD 748) when ALL HANDS pulled alongside *Hamul* at Buoy Six, showed little topside activity except in the vicinity of their quarterdecks.

But *Hamul's* repair office and her innumerable shops are busier than a beehive in midsummer. And they are an AD's "main battery," according to a member of the Navy's West Coast Board of Inspection and Survey.

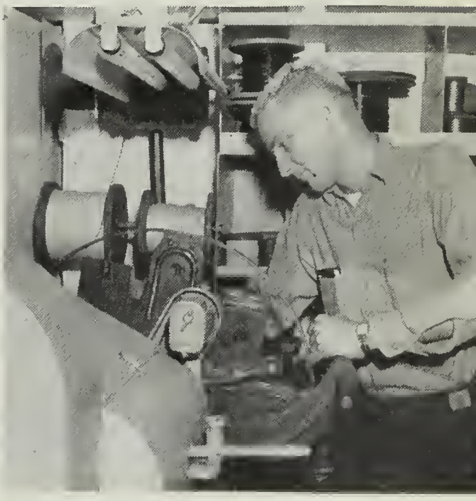
From the superstructure to deep within the hull, AD 20's shops and offices are alive with activity. The jigsaw complex of compartments which form her working spaces are loaded with the men and equipment needed to provide practically any repair or service to the DDs and their crewmen, or to most any other ship in the vicinity. They're ready, whether you want a container of ice cream or dental care, have a rush job requiring the services of the canvas, compass or carpenter shops—or the blacksmith, boat, boiler repair, electrical, machine, optical, pattern, photo, print, radio repair, sheet metal or shipfitter's shops. If none of these, then maybe your ship requires a little fast service from the pipe shop, or from a foundry capable of casting and machining parts from pig iron or an alloy.

Tender services of a more personal nature are available from the Chaplain's office (on *Hamul,* suggestively located right next to the Repair Office); or from the Sick Bay, Dental Office and Prosthetics Lab, each staffed by well-trained technicians and medical personnel.

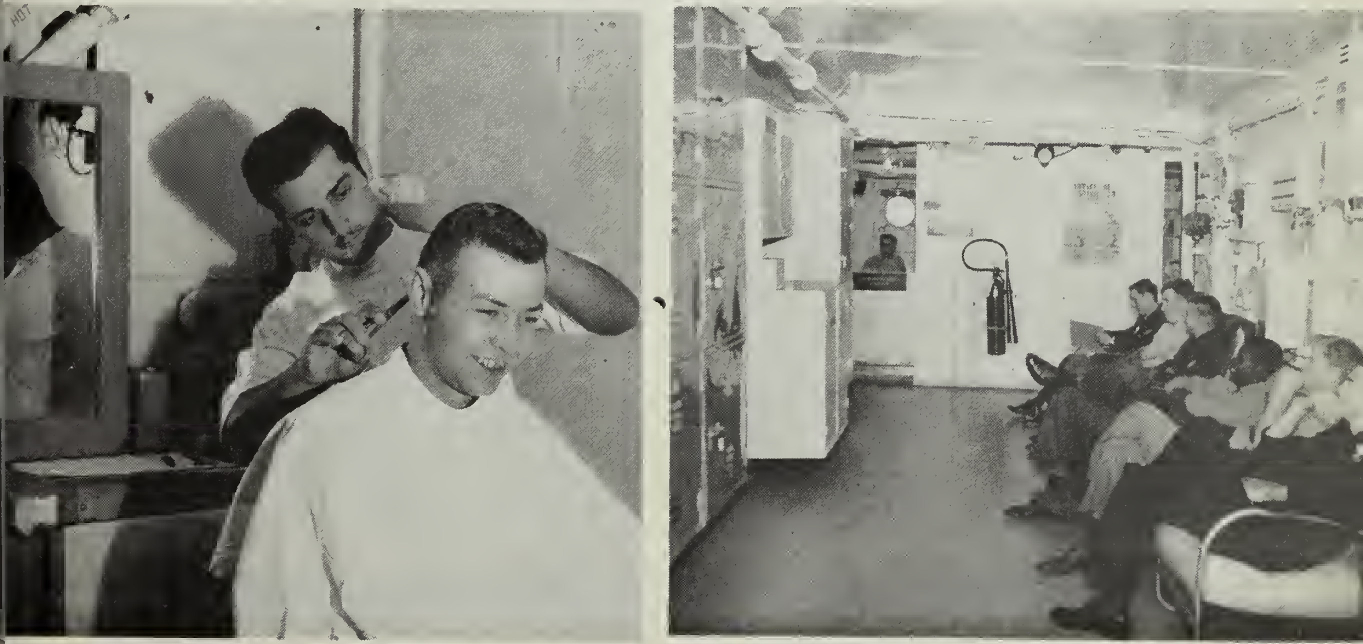
Like most ships designed for one purpose, then forced into a different mold, AD 20 is cramped for space. In many of her shops you will find a bunk or two, or three, or four, some for the use of night duty men, others the regularly assigned billets for members of the shop's force. Some of her working spaces are unhandily located; others abound with minor inconveniences.

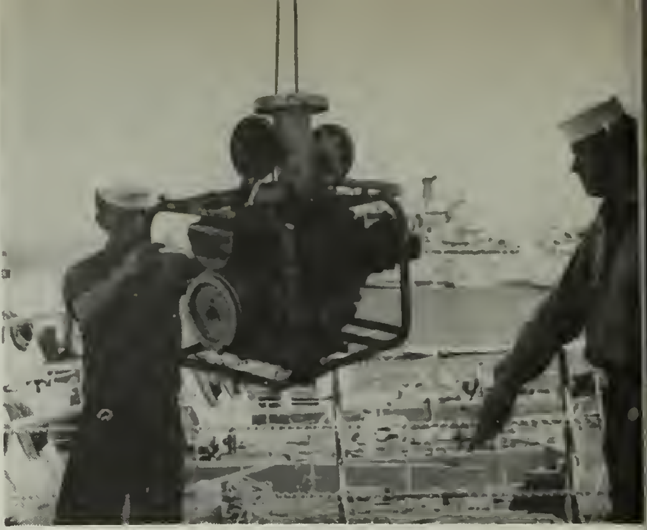
It has often been said, however, that "the crew makes the ship," and *Hamul's* complement of nearly 30 officers and 700 enlisted men lend strength to the statement. According to one crew member—anonymous naturally—the officers, from the

ELECTRICIANS keep things humming. *Above:* They test a power panel. *Below:* EM winds form-fitted coil.



HAMUL'S TENDER CARE goes to men as well as ships. *Left:* Hamul man gets clipped. *Right:* Dentist's waiting room.





VERSATILITY keeps ships shipshape. *Left:* Carpenters at work. *Right:* Portable pump is hoisted aboard for repair.

skipper (CAPT W. P. Schoeni, USN) and the "exec" (CDR W. E. Fuller, USN), right on down the line, are men who lean toward that kind of leadership which sets a standard, gives guidance or lends a hand if necessary—but leaves the chiefs and "indians" alone to turn out their best work while keeping abreast of their work schedules.

A cross section of the 700 reveals such varied shipmates as:

- Francis P. Sullivan, EMC, USN, *Hamul's* chief master-at-arms, who first joined the Navy in 1939, and has since racked up an enviable record of 4.0s for conduct, proficiency in rate and leadership.
- James W. Schaaf, ML3, USN, a quiet, clean-cut, serious craftsman who threw over a good job as a molder with one of the nation's largest aluminum companies to rejoin the Navy and get away from "a lot of petty bull."
- Ernest H. Blair, SH2, USN, another quiet one. As proprietor of "Blair's Tailor and Cobbler Shops," he stands ready to tailor a uniform, patch torn dungarees, or put new soles and heels on a worn pair of shoes.
- Walter E. McGrail, PH3, USN, who is characterized by some of his shipmates as "a true Navyman in the old tradition," can (with the aid of his striker, William M. Fisher, SN, USN), turn out identification card photographs and laminate the finished cards for a whole nest of ships, or with equal ease produce a photographic record of change of command ceremonies, inspections and similar functions.
- Charles F. Bantuelle, FN, USN, is always readv to declare, "I'd rather be back in Texas," but he likes his present job as librarian and assistant to Chaplain William H. O'Connell, LT, CHC, USNR. And there are many others.

Some of these, like most of *Hamul's* men, can do their share of griping when asked how they like duty in AD 20, but most of it seems to be "sound and fury, signifying nothing."

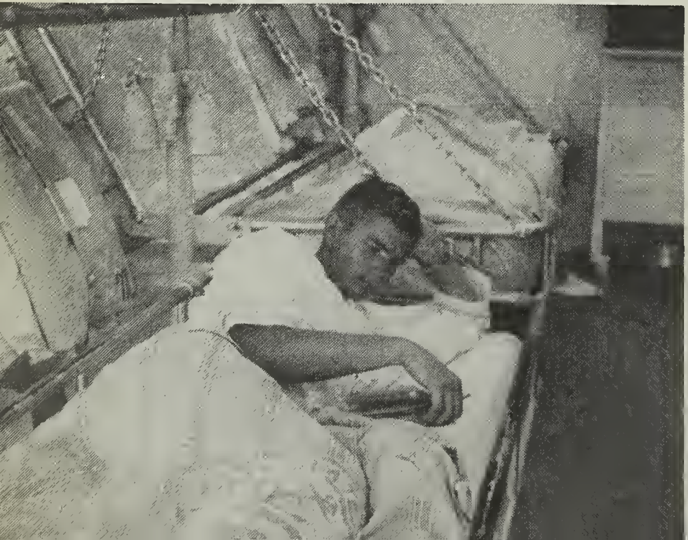
Even as your destroyerman will tell you that "tender liberty" has its good points, your *Hamul* man will admit that duty on board that tender also has its good points—ranging all the way from recreation facilities to duties that are varied, interesting, and of a type to give a man a sense of accomplishment when his day's work is done.

And there are other signs which belie any gripes: The banter to be heard about the mess decks at meal time, for instance, or the way *Hamul's* liberty parties conduct themselves after an evening on the beach.

The real spirit behind this hard working ship is summed up by such signs as the one appearing on the boiler shop's expanded metal bulkhead—"The impossible—2 hours, A miracle—2 days."

—Barney Baugh, JO1, USN

A-1 SERVICE—Sick bay *(left)* keeps destroyermen healthy. 'Tailor and cobbler shop' *(right)* keeps them well-dressed.



This Is Your Navy

High Floating Research

SUPERSONIC JET planes may skim along at speeds exceeding 1000 miles per hour and rockets may soar hundreds of miles above the earth's surface, but research and development of both is still tethered to the fragile and helpless free flight balloon, bobbing aimlessly at the mercy of the slightest breeze.

This is the story of these apparently ineffectual bumbershoots, and of how the Navy has learned to probe with them the outermost frontiers of science.

In addition to the relatively prosaic task of gathering weather information, modern day balloons are used for studies in astronomy, aeromedicine, cosmic rays, astrophysics, geophysics and military science.

These studies have been made possible largely through the Navy's interest in ballooning. Navy research and experiments in the *Skyhook* program have resulted in the development of a new type plastic balloon which has opened the stratosphere to scientific research. *Skyhook* was inaugurated in 1947 to obtain cosmic ray, meteorological and other geophysical data. This project has been continued to date. Accomplishments have been made whereby the stuff of dreams of 10 years ago are now a sober reality.

Original dreams of a manned space laboratory were fulfilled in August 1956, when two naval observers completed a high-altitude meteorological experiment while on a *Skyhook* plastic balloon flight. In this initial manned flight, the observers rode in an open fiberglass gondola suspended below a balloon constructed of polyethylene plastic only .002 inches thick. They reached an altitude of 40,000 feet.

The observers making this flight were LCDR M. Lee Lewis, USN, a former enlisted man who is assigned to the Bureau of Aeronautics, Washington, D. C., and Mr. M. D. Ross, a meteorologist for the Air Branch of the Office of Naval Research.

The initial manned plastic balloon flight was just the beginning, however, for in November, Lewis and Ross in their second Stratolab flight established an unofficial altitude record for a manned balloon flight when they soared to 76,000 feet above the earth's surface. Taking off from the Stratobowl, in the Black Hills, near Rapid City, S. D., the two veteran balloon experts reached ceiling in two hours and 51 minutes. It took them, however, only an hour and 21 minutes to come down. They made a "crash" landing seven miles northwest of Brownlee, Nebraska, 140 miles from their take-off point.

In this record-making flight Lewis and Ross rode in a spherical, pressurized aluminum gondola that was partially built in 1946 for Project Helios, but was never used. It is a true "space" cabin and might even be considered adequate for a trip to the moon. Flight instruments are mounted on a panel on one side of the gondola while scientific instruments and radio controls are installed on the other. By such an arrangement, each of the men could easily observe the panels and control the equipment. This space laboratory is attached to the balloon by a net arrangement with nylon webbings cradling the gondola.

It is expected that the Navy's manned Stratolab program will supplement the current (unmanned) *Skyhook* project. Its objective is "to provide a laboratory facility for observers in the stratosphere to conduct unique experiments and make scientific measurements that have never before been possible, at altitudes ranging up to 100,000 feet." This concept of a "space laboratory," however, is a far broader one than that envisioned in 1946. It is based on a need for scientific data which can only be obtained at this time by the balloon flight method. A balloon-borne lab is a practical, economical method to obtain data in the fields of astronomy, astrophysics, and physics of the upper atmosphere.

The Naval Medical Research Institute tracked both Stratolab flights with an airplane equipped as an aeromedical laboratory. In this flying medical lab, a team of Navy scientists headed by Captain N. L. Barr, (MC) USN, evaluated data from a radio broadcasting version of an electrocardiograph which recorded the heart reactions and respiratory conditions of Lewis and Ross. Captain Barr conducted tests on Lewis and Ross in an effort to determine if high altitudes cause adverse physiological or psychological effects.

READY FOR THE BALL—Navy scientist M. D. Ross checks Stratolab gear prior to entering aluminum gondola for a record-breaking balloon ride.

To insure adequate safety of the observers during the high-altitude balloon flights, experts carefully analyzed every problem and determined requirements for each phase of the flights. Thus a sound approach was made by determining what would go into the gondola, what was needed on the ground, available components and development required. In the event of an emergency, the gondola was rigged to a 64-foot cargo-type nylon parachute. Both Lewis and Ross also wore parachutes and partial pressure suits in the event they had to bail out of the gondola.

The Navy's pursuits in the use of balloons for upper atmosphere research can be traced with the development and expansion of the Office of Naval Research which has pioneered in this field. ONR was established in 1946 and one of its first endeavors was in the field of stratospheric research.

At that time it was felt that there was a need for establishing a stable platform in the upper atmosphere from which scientific information, never before available, could be collected. Such information would be of value in upper atmospheric physics, nuclear energy, cosmic radiation, and in connection with transsonic high-altitude flights.

Before this space laboratory could be established, a means of getting it to the desired altitude and keeping it up long enough to make the desired observations had to be figured out. Planes and rockets, both capable of reaching the stratosphere, proved impracticable as their inherent limitations prevented them from maintaining observers in the stratosphere for extended periods.

Balloons seemed to be the only answer to this problem but existing rubber balloons had extreme limitations at high altitudes.

A substitute for rubber was found early in the game. According to LCDR Lewis, the Navy utilized the ideas of Dr. Jean Piccard, noted chemist and aeronautical engineer, who believed plastic could be successfully substituted for conventional balloon material. Lewis, who has worked in aerology since enlisting in the Navy, served as meteorological officer during Piccard's attempt to ascend in a plastic balloon in 1946.

With plastic balloons appearing to be the vehicle required to carry the proposed research platform into the stratosphere, the Navy put its plans into action by inaugurating Project Helios. This was one of ONR's first major projects and the Navy's first real attempt at upper atmosphere research.

Project Helios called for the construction of a cluster of plastic balloons capable of making a flight into the atmosphere with a manned gondola equipped with a battery of scientific instruments. This balloon-borne space laboratory was expected to go to a height of 100,000 feet and remain there for about 10 hours. Data was to be collected from the time of launching until the balloons were recovered afterward.

ON THE UP-AND-UP—Balloon leaves deck of *USS Staten Island* (AGB 5) to gather information on cosmic rays during Operation Mushrat in 1953.

The concept of this system was the use of a lightweight plastic which permitted a reduction in the weight of the balloon itself to a fraction of that of rubberized fabric balloons. Thus, the light-weight cluster of plastic balloons would be able to reach greater altitudes.

Plastic was more practical than rubber, not only from the standpoint of weight but because of its low cost. In spite of today's high cost of living, a plastic balloon costs much less than a rubber balloon did when the previous high-altitude record for a manned balloon flight was set more than 20 years ago. The polyethylene plastic used in making *Skyhook* balloons costs less than five cents a square yard while the rubberized material formerly used cost about $2.00 per yard.

After a year's study, Project Helios was dropped as the technology of plastic balloon flights had not been developed to the stage where manned flights would be feasible. However, even if the Navy technicians never got off the ground Project Helios could not be called a failure. It was successful in proving the value of plastic balloons for upper atmosphere research. Although not sufficiently advanced to permit manned flights, the plastic balloons were developed to the extent where they could carry radio-controlled scientific instruments to high altitudes for periods ranging from a few hours to a day or more.

These instrument flights provided a means of collecting some, but not all of the desired information that could be obtained from a manned platform. They did, however, provide information never before available and opened to scientists an entire new field of research.

Accordingly Project *Skyhook* was launched. It was from this, the Navy's second phase in probing the upper atmosphere, that the famed plastic gas bags were tabbed "*Skyhook* balloons."

Larger, single balloons replaced the previously planned clusters. The Navy's first plastic balloon flight was made from St. Cloud, Minn., on 27 Sep 1947. Carrying a payload of 63 pounds, the large pear-shaped gas bag went about 100,000 feet before descending at Eau Claire, Wis. Since that initial flight more than 1000 *Skyhook* balloons have been sent aloft from locations throughout the U.S., Canada and Japan. Flights have also been made from Navy and Coast Guard ships in the Atlantic and Pacific, as well as in the vicinity of the North Pole and the equator.

Projects such as *Skyhook* and other Navy research programs are made possible only through the joint efforts of the Navy, private industry and the research facilities of colleges and universities. Today, many of the same people, both military and civilian, and the same activities that combined scientific talents more than 10 years ago are still working together in connection with the space laboratory or other phases of the over-all *Skyhook* program.

Transosonde

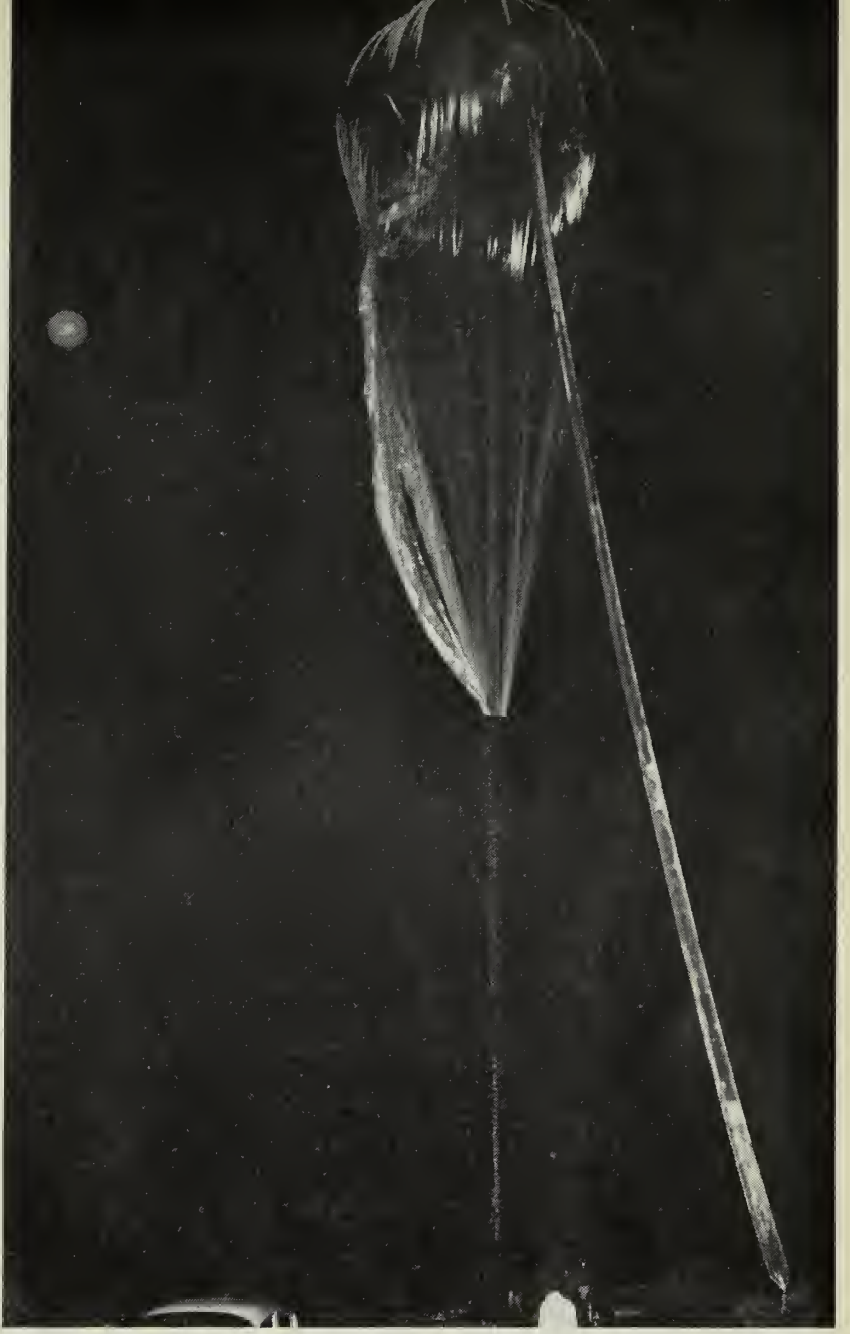
With the potentialities of *Skyhook* proven, the Navy began to use these balloons to collect weather data. This idea came from the Japanese balloon campaign during WW II. It was discovered that the balloons launched from Japan followed much the same course as the major storm centers and traversed one of the larger and more important ocean areas for which, until that time, no weather data coverage was available.

The Japanese balloons in their flights across the Pacific, offered a potentially valuable approach to the collection of upper meteorological data. This approach took form in 1949 when a Navy aerological team commenced the collection of stratospheric wind data obtained from floating balloons.

In the transosonde system, balloon-borne weather stations are sent aloft and controlled to float along a standard pressure surface for several days. While in flight, radio signals are sent out from 50-watt radio transmitters which permit the balloon to be tracked by land-based direction finder stations. At pre-set intervals, readings of the temperature, air pressure, wind velocity and other meteorological data is also transmitted by code while the balloons are airborne.

The Navy's transosonde program is carried on jointly by the Bureau of Aeronautics and the Office of Naval Research. The first flights under this program were made at Tillamook, Ore., in the fall of 1952 and from Minneapolis, Minn., in the spring and summer of '53.

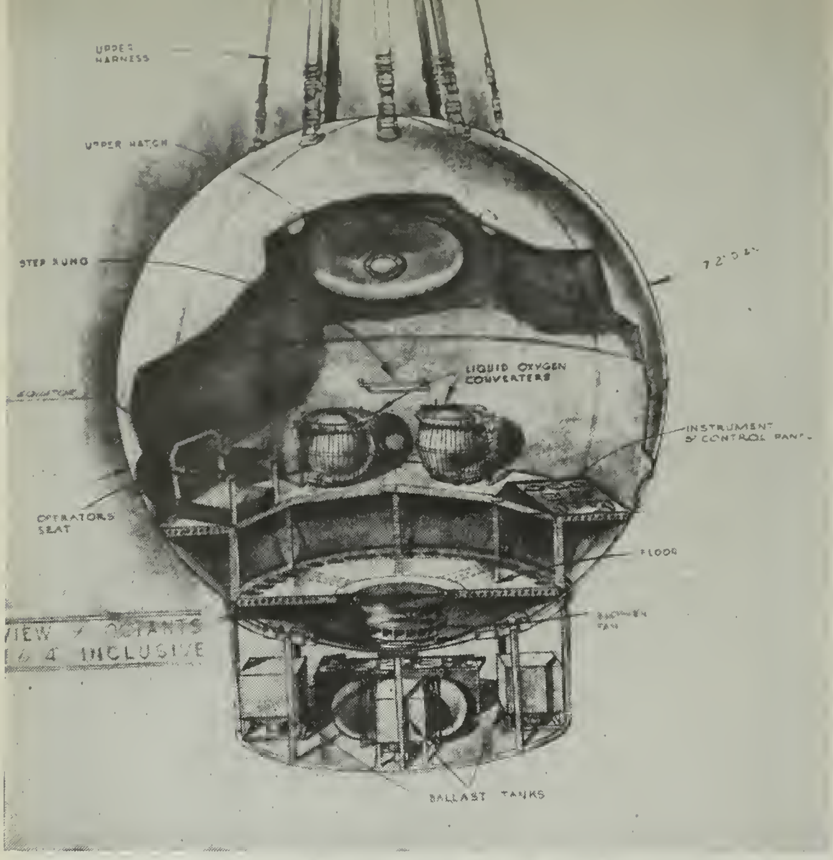
Among recent phases of the transosonde program was the launching of a series of 20 balloons from the Naval Air Facility at Oppama, Japan. These flights gathered information from the jet stream, a high moving air current that moves from Japan across the Pacific, to the U. S. From this information meteorologists were able to determine the speed and direction of the wind, as well as to plot pressure contours for the jet stream, similar to the more familiar weather maps published in the daily papers.



KING OF THE BALLOONS, a large plastic Skyhook hangs in the dark sky of Black Hills of South Dakota waiting to carry Navymen sky high.

The trans-Pacific transosonde flights were made with plastic balloons of the *Skyhook* type, 39 feet in diameter. Carrying 200 pounds of weather and communications instruments, complete with necessary power supplies, the balloons also carried 400 pounds of ballast, sufficient for flights up to six days. They were designed to probe the skies at an altitude of 30,000 feet. If they descended below 28,000 feet, an automatic device ended the flight and lowered the equipment by parachute.

The person in charge of the Navy's transosonde program is none other than LCDR Lewis. He heads a team consisting of one chief warrant officer, five enlisted aerographer's mates and three aviation electronics technicians. Before going to Japan, Lewis and his nine-man tran-



WHERE'S STARBOARD?—Artist's drawing shows interior of space ball. Pressurized sphere carried its two passengers up to height of 76,000 feet.

sosonde team conducted tests across the Atlantic from Weeksville, N. C. Since completing the trans-Pacific operations. They have been engaged in evaluating results of the flights from Japan, and conducting a new series of balloon flights at Fallon, Nev.

Commenting on the tests from Japan, Lewis feels they were very successful. Of the 20 balloons launched, five of them landed in the United States. Upon take-off they rose from sea level to 30,000 feet where they were intercepted by the jet stream. Some crossed the Pacific at speeds more than 200 miles an hour. The balloons that made it to the U.S. landed at Forest, Miss.; Detroit, Mich.; Brownsville, Tex.; Denver, Colo., and Long Island, N. Y. They flew an average of 5581 miles from their launching site. Actual mileage, however, is much more than the Great Circle distance between Japan and the points where the flights ended, as the balloons zigzagged with the jet stream.

Of the 20 launchings, balloon number 15 was considered by Lewis to have been the most successful. It crossed the Pacific, then the United States and the Atlantic Ocean on a straight line. In three days and 18 hours it traveled more than 10,000 nautical miles at an average speed of 110 knots. Three days after leaving Japan, balloon No. 15 was reported to be 300 miles west of the Madeira Islands. At that time, it was still at an altitude of 30,000 feet and cruising at a speed of 120 knots. It reported temperatures of 55 degrees below zero almost six miles above the Portuguese islands which are known for their sunny skies and ideal climate. The equipment was later recovered by a Dutch merchant vessel in the Mediterranean, just east of the Strait of Gibraltar.

"All of the flights were not that successful," Lewis said, "In fact, our first launch fell into the Pacific some 24 hours after it left Oppama and one took a swim about 600 miles from Hawaii. One of the plastic bubbles pulled a fast one on us, and went exactly 180 degrees off course." Another had a defective ballast mechanism and dropped its gondola into the Pacific after it had risen to 48,000 feet and before its safety devices were activated. In spite of these failures, Lewis termed the project "highly successful."

Currently the Navy plans call for putting the transosonde system into use over both the Atlantic and Pacific. As a standard part of the Navy's vast weather forecasting program, information gathered on such flights would be passed to weather organizations of all nations. This would give the world a source of weather information that is now unavailable.

Cosmic Ray Studies

The field of cosmic ray research is perhaps the most interesting of the many uses for which the Navy's plastic balloons are used. During the last nine years the Office of Naval Research has sponsored cosmic ray investigations at various latitudes from the equator to the North Pole in a continuing probe of the stratosphere.

High-altitude cosmic ray measurement was one of Project *Skyhook's* original purposes. In recent years, however, such studies have been jointly conducted with the Atomic Energy Commission.

In 1953 Projects *Mushrat* and *Churchy,* a part of the over-all *Skyhook* program, were carried out in the extreme northern latitudes and on the equator. (See ALL HANDS of December 1953, pages 10-11). These projects resulted in the collection of data concerning the mysterious particles which bombarded the earth's atmosphere from the vast vacuum of outer space. Cosmic ray research during these tests was conducted at altitudes of 23 miles, or above more than 99 per cent of the earth's atmosphere. Studies at this and even higher altitudes are required in order to examine cosmic radiation in its original form. Once cosmic rays strike the atmosphere, their nature is changed.

It is possible to collect cosmic data during balloon and rockoon flights by means of neutron counters, from Geiger counters or ionization chambers located in the nose of rockets. The data concerning cosmic radiation is measured during the rocket's entire flight and is telemetered (radioed) to the ship or launching station where it is recorded and analyzed. For this reason, it is unnecessary to recover the rockets after flight.

Today, the Navy and Atomic Energy Commission are continuing such studies. Among recent tests was a series of 10 flights from the Goodfellow Air Force Base at San Angelo, Tex. During January '55 and '56, more than 20 flights were made from that base by *Skyhook* balloons measuring up to 90 feet in diameter. Each balloon carried about 150 pounds of instruments for studying the high energy nuclear particles from outer space. These instruments were parachuted to earth upon the end of each test.

During the past year other *Skyhook* flights were launched from Minneapolis, and International Falls, Minn., as well as from Iowa City, Iowa. A new series of *Skyhook* balloon flights are scheduled for this month (January 1957) from Guam. This operation will bear the title of EQUEX '57.

Skyhook balloons come in various shapes and sizes. They range in diameter from one foot to an extreme of 200 feet. They are often as long as a 10-story building. Sometimes the plastic bags are spherical or pear shaped. Owing to reflections from the sun and their unusual shapes, the *Skyhook* balloons have often been reported as flying saucers.

Weather conditions must be perfect before the balloons can be launched. Because of their large physical size — sometimes up to 135-feet in length when inflated, and the frail nature of the polyethylene, only one or two thousandths of an inch thick — great care must be taken when preparing them for flight.

When wind and weather conditions are perfect, the balloons are taken out of their boxes and laid on a protective ground cloth. Helium is then inserted by an inflation tube, passing directly to the balloon's crown. The outside is held by a plastic "reefing" tube which protects the balloon from damage and prevents it from billowing out like a sail in the wind.

As the helium flows in the balloon begins to rise into the air. As it grows larger it becomes more buoyant and continues to rise until the entire balloon is in a vertical position. Inflation continues until the balloon is able to lift the weight set for the flight, plus a predetermined amount of free lift. This phase of the launching is known as "weighing-off."

When the balloon lifts the required weight, the flow of helium is stopped and the inflation and reefing tube is removed. After the gondola, rocket, or bundle of scientific instruments is attached, then the balloon is ready for take-off. For the rockoon flights, the balloon is sent up about 100 feet on a line from a winch before the rocket is attached.

The balloons are only inflated to about 10 per cent of their volume at take-off. As they rise, the helium expands, filling out the balloons until they reach ceiling altitude, where they're filled to capacity. Any excess helium pressure is valved out and the balloons float at static equilibrium.

The largest plastic balloon ever built, the *Super Skyhook,* was launched from the University of Minnesota airport on 18 May 1954. It soared higher than 117,000 feet. This super balloon occupied more than three million cubic feet in volume and carried almost 400 pounds of Navy instruments.

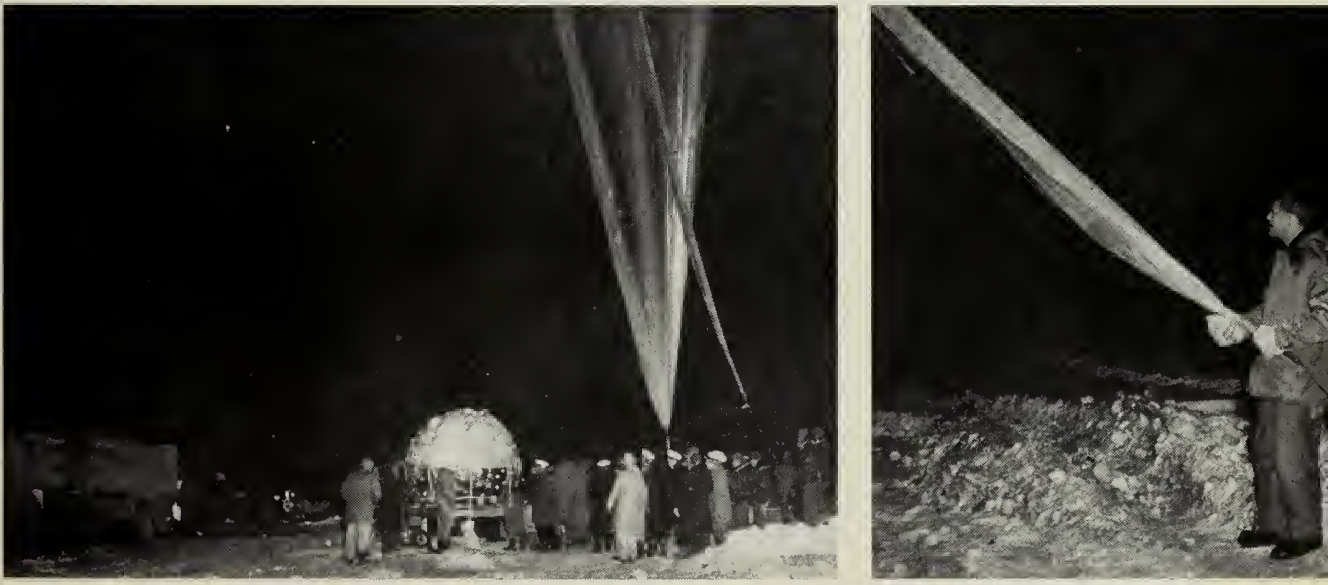
On 7 Sep 1956, a new type plastic balloon, developed by the University of Minnesota under a Navy contract, set a new balloon altitude record. It went up to a height of 143,000 feet. This flight was a significant breakthrough for furthering the high-altitude research program. It opened the way to new and intriguing research as up to this time, upper atmosphere balloon research had been limited to altitudes of approximately 120,000 feet. This higher altitude will establish a new threshold for scientists.

Through the use of balloons, the extent of future stratospheric research seems unlimited. Navy scientists today believe that by the rockoon method they can send a rocket to the moon in the not-too-distant future. They speculate that a 4,000,000 cubic foot *Skyhook* balloon can carry a solid-propellent step rocket with a four-pound payload to a height of 70,000 feet or more before it's launched.

They also feel that balloons may be used in the future for launching man-made satellites. Present plans call for shooting the man-made moon into its orbit during the IGY by means of a three-stage rocket. It is felt that in the near future balloons could carry the satellite into the stratosphere where the true conquest of space will begin.

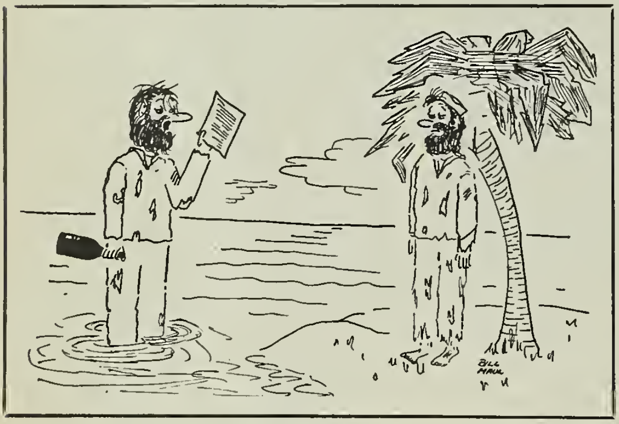
—H. George Baker, JOC, USN

COOL LAUNCHING SITE—In cold night air helium is pumped through long plastic tube leading to balloon.



"dere Sally—the Navy made me a tipest."

"Well you see sir, it's been my experience . . ."

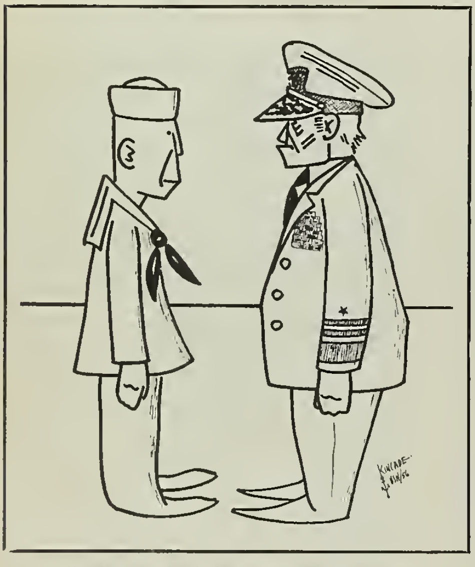


"It's from us."

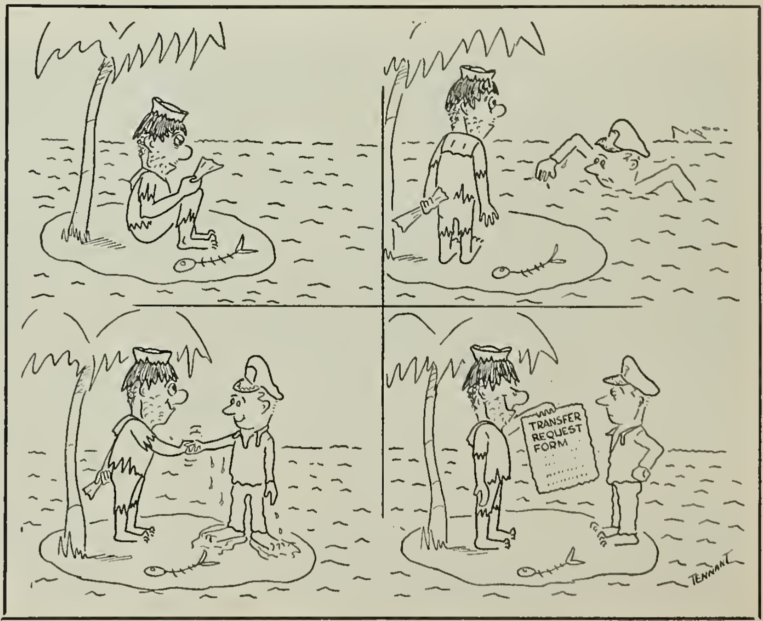
The Winners

The second annual All-Navy Cartoon Contest has pulled into port with its salty humor. After off-loading on the shores of BuPers the top five of the crew were selected and are passed on to you.

Top right: First place winner entered by **Robert Jackson Greaves, HMC(SS), USN**. *Top left:* Second place cartoon by **Robert Carola, SA, USN**. *Left:* Third place cartoon by **William R. Maul, CT3, USN**. *Bottom left:* Fourth place winner by **Paul Bernard Kincade, PNC, USN**. *Bottom right:* Fifth place cartoon, a panel by **Theo. H. Tennant, YNCA, USN**. Winners will receive trophies.



"I see you don't have a Good Conduct Medal either, Admiral."



Sailors with an All-Navy Sense of Humor

It's a sad state of affairs when a person can no longer find some humor in his job or situation. A philosopher—who had been to sea—once said that laughter and humor ails the heart and mind. You'll have to go a long way to find a Navyman who can't laugh.

The entries in the 1956 All-Navy Comic Cartoon Contest underline this theme of humor as many of the shipboard routine, transfers and cartoons submitted were parodies on habitability, junior-senior relations, training.

The only requirement to enter this contest was that the person be on active duty (or be a dependent of a man on active duty) for more than 90 days, and naturally, that the entry be in good taste. The theme of the cartoon, of course, must be some phase of Navy life.

In the 1956 contest, more than 250 cartoons were submitted in the competition. In addition to the five winners and five honorable mentions published here, a number of other cartoons which were entered in the contest will be published in coming issues of All Hands Magazine.

Persistence must pay off. Two contestant cartoonists, who last year gained honorable mentions, moved into the select five this year. Wm. R. Maul won third place while Theo. H. Tennant placed fifth.

- The only other repeater in the 1956 competition was H. G. Walker, QM1, USN, of USS *Mulberry* (AN 27), again as an honorable mention. Besides Quartermaster Walker, the other winners of spots as honorable mention were:

- Frederick E. Cooksey, RMC (SS), USN, *of* USS *Thornback* (SS 18), whose cartoons won two honorable mentions.
- Howard E. Sweitzer, PFC, USMC, of the Marine Detachment, Retraining Command, Portsmouth, N. H.
- Paul B. Kincade, PNC, USN, Research Field Activity, San Diego, Calif., who also had a cartoon in the top five.

The interest shown in the All-Navy Comic Cartoon Contest, one of the variety type contests sponsored by the Chief of Naval Personnel, has received great widespread interest and will be conducted annually. Now, then, is the time to start thinking about and drawing your cartoons for the 1957 contest.

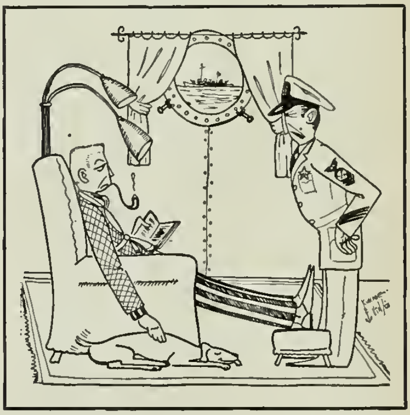
In case you don't remember, dependents are also eligible to enter the All-Navy Comic Cartoon Contest. If your dependent has a gag he or she wants to enter, the Navyman should submit them as he would his own. The dates of the 1957 contest will be published in a 1710 series BuPers Notice.

Other "variety" type contests planned for 1957 include the fourth annual All-Navy Talent Contest and special events in various fields of sports.

Honorable Mention,
F. E. Cooksey, RMCA (SS), USN

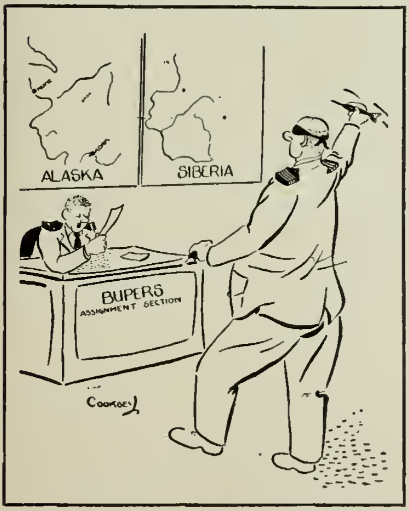
"Been waiting long, Boats?"

Honorable Mention,
P. B. Kincade, PCN, USN



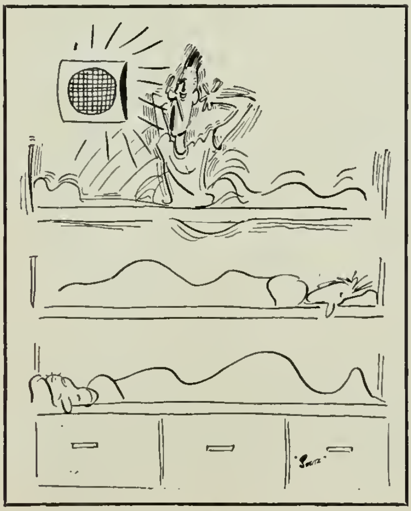
"Fosdicke, the Captain feels that your habitability program conflicts with that of the ship!"

Honorable Mention,
F. E. Cooksey, RMCA (SS), USN



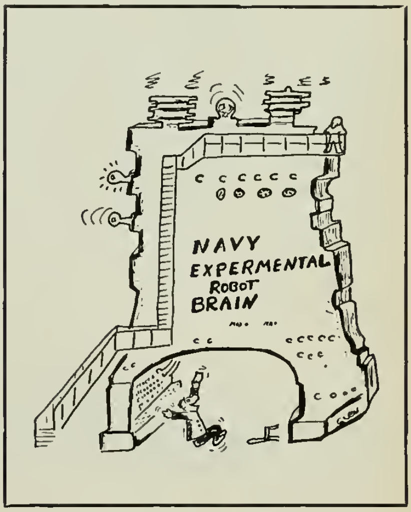
"Evans, W., intelligent, diligent, fine leader, will go far."

Honorable Mention,
PFC H. E. Sweitzer, USMC



"Now hear this!"

Honorable Mention,
H. G. Walker, QM1, USN



"Success! Success! . . . it just submitted a request for transfer."

LETTERS TO THE EDITOR

This section is open to unofficial communications from within the naval service on matters of general interest. However, it is not intended to conflict in any way with Navy Regulations regarding the forwarding of official mail through channels, nor is it to substitute for the policy of obtaining information from local commands in all possible instances. Do not send postage or return envelopes. Sign full name and address. Address letter to: Editor, ALL HANDS, Room 1809, Bureau of Naval Personnel, Navy Dept., Washington, D. C.

There's Navy in the Money

Sir: Could you tell me if there was ever a coin minted in honor of the Navy? I have come upon a copper coin that has "Our Navy" on one side and on the other four flags, a drum and two ancient cannons. One cannon has the inscription "Union" on the barrel while the other has the numerals "61". The coin is about the size of a penny. —D. C. B., SW1 USN.

• *Our editor-in-charge-of-coins has been pinching pennies ever since he fell out of the piggy bank, and he says the "coin" that you've found is actually one of the thousands of different "hard times tokens" which came into vogue around 1820 and were in general use until shortly after the Civil War. Minted in copper, brass, silver, nickel and other metals, these tokens were issued by merchants to be used as change when real money was rapidly disappearing from circulation because of hoarding practices. They were never known as "money" but served the same purpose. Designs of these tokens were varied and many had patriotic designs and legends.*

You might be interested in knowing that one token minted in 1837 bore on one side the head of the Goddess of Liberty and on the reverse side the phrase "Millions for Defense, Not One Cent for Tribute." This legend was a reminder of our need for a strong Navy in the late 1790s before our disagreement with France.

Other tokens, such as "Our Navy" and "Our Army," placed in circulation at the time of the Civil War, praised the fighting qualities of the nation's armed forces. A typical one has the words "Army and Navy" inscribed on one side surrounded with a wreath and bearing a crossed-swords-and-anchor design at the bottom, with the legend "The Federal Union — It Must and Shall Be Preserved" on the other.

Our numismatist (that's the same penny-pinching editor) says a man who wanted to learn all about hardtimes tokens could spend a lifetime on research, since tokens are still coming to light that have never been classified. —Ed.

'Over There' with 'A Grand Old Flag'

Sir: I read in a magazine recently that George M. Cohan was awarded a Medal of Honor during World War I for writing the hit song. "Over There." I thought that this medal was awarded only to military personnel for deeds of valor above and beyond the call of duty during actual combat. Did George M. Cohan receive the Medal of Honor and was it just for writing the above named song?—L. E. L. TE1, USN.

• *The Army Medal of Honor was not awarded to George M. Cohan. However, an Act of Congress of 29 Jun 1936 authorized the President to present a Gold Medal to George M. Cohan in recognition of his services during World War I in composing "Over There," and before that, "A Grand Old Flag."*—Ed.

WO Collar and Sleeve Insignia

Sir: The August issue of All Hands (pages 32-33) contained a chart showing the Paths of Advancement For Enlisted Personnel. The new Aviation Warrant Officer collar and sleeve insignia are shown. The WOs in my squadron would like to know if anything official has been published, or is about to be published, concerning the wearing of these insignia.—C.H.K., CWO, W3, USN.

• *Coming up! Descriptions and photographs of the Warrant Officer collar and sleeve insignia changes have recently been published in Change No. 2 to the "U. S. Navy Uniform Regulations." This change is dated 6 Feb 1956 and was distributed in August to all ships and stations.*—Ed.

Proceed Time and TAD

Sir: I would like some information on the granting of "proceed time." Take the case of an officer who is detached from a permanent duty station and ordered to temporary duty. He is ordered to report to a force commander for assignment upon completion of the temporary duty. However, while the officer is still on the temporary duty, the force commander modifies his orders to read report to a specific duty station in place of "report to the force commander for further assignment." Is the officer entitled to additional proceed time upon completion of the temporary duty because of this modification of his orders or must such entitlement be based on a new set of orders?—J. D., BMC, USN.

• *A modification of orders is a continuation of the basic orders and thus there is no further entitlement to "proceed time" in connection with those orders.*

Your reference is Article C-5315(h), "BuPers Manual," which states: "When an officer is detached from one permanent duty station and is assigned temporary duty en route, proceed time is allowed only upon detachment from the permanent station, and prior to reporting at the temporary duty station. No additional proceed time will be allowed under such orders, and any proceed time not taken prior to reporting at the temporary duty station may not be taken after completion of the temporary duty."—Ed.

'Missy' is Missed by Many

Sir: Many thanks to K. J. Seamon, CSC, for the very splendid poem bringing back memories of the "Old Missy" in the July issue of All Hands. She was (and is) a great ship and my tour of duty in her (1919-1925), is filled with many happy memories. Great officers, great men and something of her brushed off onto anyone aboard her. I think the "Missy" originated "ship's spirit" and indeed her being called "Home Ship" was well deserved.—C.A. Richter, *ChBosn*, USN (Ret.).

• *If you liked that, then certainly you'll want to read the book supplement in the November issue that told all about the famed* USS *Mississippi (EAG 128), ex-BB-41.*—Ed.

Schooling Cut-Off Date

Sir: I was discharged from the naval service in June 1954, and entered school under provisions of the "Korean G. I. Bill" in September of that year. In October 1954 I reenlisted in the Naval Reserve and returned to active duty on 15 Mar 1955. I will again be released to inactive duty in March 1957 and would like to return to college the following September, but I don't know whether I am still entitled to school benefits under the GI Bill.

It is my understanding that I was allowed three years in which to begin schooling, dated from the time of my release to inactive duty. That makes my cut-off date 23 Jun 1957. If my entitlement still exists, will I be able to enter school the following September? I would also like to know if I may change my course of study.—T. L. B., Jr., USNR.

• *You are no longer entitled to schooling under the Veterans' Readjustment Act of 1952 (your "Korean G. I. Bill"). Section 212, Part II, of that Act* *states in part: "No eligible veteran shall be entitled to initiate a program of education or training under this title after 20 Aug 1954, or after three years after his discharge or release from active service, whichever is later.*

"The program of education and training of an eligible veteran under this title shall, on and after the delimiting (cut-off) date for the veteran to initiate his program, be pursued continuously until completion except that an eligible veteran may suspend the pursuit of his program for periods of not more than 12 consecutive months, and may suspend the pursuit of such program for longer periods if the Administrator finds that the suspension for each period was due to conditions beyond the control of the eligible veteran."

Since you voluntarily reenlisted and returned to active duty, you are no longer entitled to schooling under the Act. Further information concerning the Act may be obtained by reading Public Law 550 of the 82nd Congress, as amended.—Ed.

Aerology Officer Billets

Sir: I have applied for a postgraduate course in Aerology. If I am selected for the 18-month course, what type of duty could I expect for the three years following graduation?—D. H. G., LTJG, USN.

- *If you are selected and successfully complete the aerology course, you may anticipate assignment to a billet at an air station, weather station, or aircraft carrier. Aerology graduates normally fill such billets.*—Ed.

Eight O'Clock Reports

Sir: Will you please tell us the correct phraseology for calling away the evening reports?

We say it should be, "On deck (or wherever specified by duty commander) all twenty hundred reports."

However, "The Watch Officer's Guide," 1953 edition, says, "In accordance with time-honored custom of the service, the reports made to the Executive Officer or Duty Commander by the heads of departments at 2000 are known as the *eight o'clock* reports, not the *twenty hundred* reports."

Which is right?—W. F. S., QM1, USN, and A. F. F., BM3, USN.

- *You'd better go by the book. Eight o'clock reports originated before the Navy began using the 0000-2400 time system.*—Ed.

You Met the Requirements

Sir: In July 1951, I reenlisted for six years on broken service. 'Reenlisted under BuPers R.S.I. 211.4, 1951' was entered on my previous discharge. Could I have a brief outline of this instruction?—J.C.F., AD1, USN.

- *The authority under which you were reenlisted was Recruiting Service Instruction 211.4, entitled "Instructions Governing Reenlistments in the Regular Navy under Broken Service." This instruction permits the Recruiting Service to reenlist personnel who have been discharged for more than three months, without the prior approval of the Chief of Naval Personnel, provided the individual is qualified. To qualify, he must meet mental, physical, moral, dependency and age requirements.*—Ed.

Ship Reunions

News of reunions of ships and organizations will be carried in this column from time to time. In planning a reunion, best results will be obtained by notifying The Editor, All Hands Magazine, Room 1809, Bureau of Naval Personnel, Navy Department, Washington 25, D. C., four or more months in advance.

- *Eighth Beach Battalion*—The second reunion will be held in Montreat, N. C., on 9-12 May. For additional information, write to Clifford L. Legerton, 263 King Street, Charleston, S. C.
- USS *Inch* (DE 146)—All former shipmates who want to hold a reunion, with time and place to be decided by mutual consent, may write to Herman Melanson, 485 Lexington Avenue, New York, N. Y.
- USS *Oliver Mitchell* (DE 417)—All former crew members who are interested in holding a reunion, with time and place to be determined by mutual consent, may contact Llewellyn G. Owens, 29 South La Salle Street, Chicago 3, Ill.
- USS *LST 510*—Former crew members who want to hold a reunion early in 1957 in New York City or Chicago should write to John J. McGlew, 432 Terrace Avenue, Hasbrouck Heights, N. J.

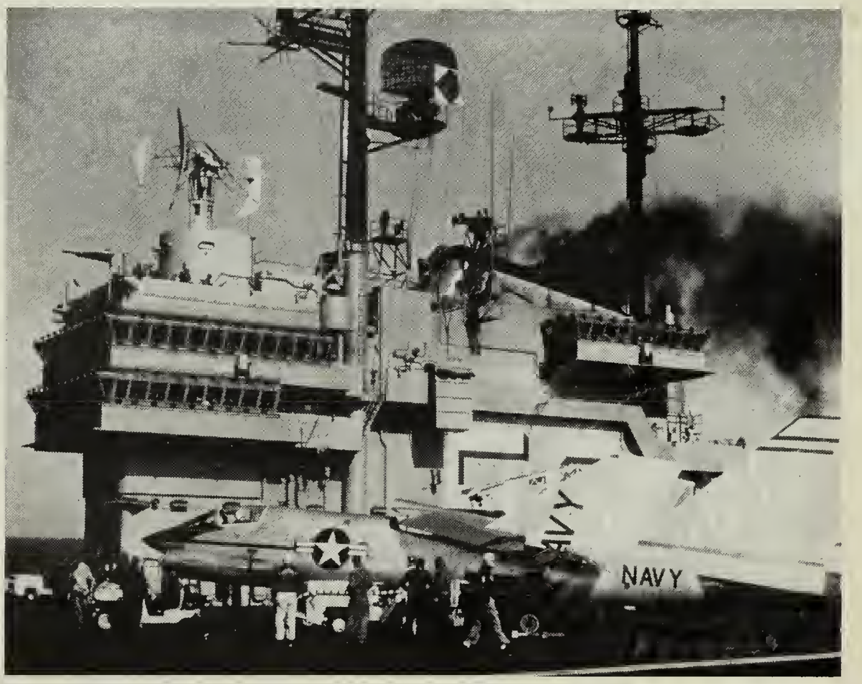
Navy's Longest Submarines

Sir: In one of your All Hands articles you mentioned that USS *Salmon* (SSR 573) and *Sailfish* (SSR 572) are officially listed as 343-foot boats. Actually, their lengths are 350 feet 6 inches and 350 feet respectively. Do you know how come?—W. H. McK., SN, USN.

- *Yes, there is a very good reason. The shipbuilding specifications originally called for an over-all length of 343 feet for each vessel. However, during construction the hull lengths were increased somewhat, changing the over-all lengths to approximately 350 feet 6 inches for both submarines.*

The variation in length that you mention is normal since 6 inches is usually tolerated in shipbuilding. Therefore it is very possible for one of these two ships to be longer than her sister. The only reliable way to compare lengths is by taking actual measurements under identical weather and temperature conditions.

Sailfish *and* Salmon *hold the title of the two longest submarines in the United States Navy. However, two earlier submarines, both of which have been scrapped, were longer* USS Narwhal *(SS 167) and* Nautilus *(SS 168) were 371 feet in length.*—Ed.



SPEEDSTER AT SEA—F8U-1 *Crusader* is checked out on *USS Forrestal* (CVA 59). The jet set a record in Thompson Trophy event by flying over 1000 mph.

Eyes on POLARIS

SIR: Your June 1956 issue of ALL HANDS started a big discussion aboard my ship regarding the picture on page 15. It shows a typical replenishment at sea, with a carrier on the port side and a tin can on the starboard side of an auxiliary vessel. We think it is our ship, USS *Polaris* (AF 11). Are we right?—E. R. R., IC3, USN.

• *Our editor-in-charge-of-identifying-ships-at-sea says that you are right. The photo shows* USS Polaris *(AF 11) reprovisioning* USS Midway *(CVA 41) and* USS Twining *(DD 540).*—ED.

Striking for GF

SIR: How does a man become a designated aviation guided missileman striker? Although existing BuPers Instructions list two paths by which a man may become a designated striker, to the best of my knowledge neither is open to the would-be aviation guided missileman. The first method is "to complete successfully a Class A school" —and to the best of my knowledge there is no GF "A" school. The second method—passing a regular Fleet competitive exam for third class and then not being rated because of the needs of the service—is hardly possible since there are so few GF3s in the Navy that anyone making 2.5 on the exam is promoted.—R. D. W., AN, USN.

• *An aviation Guided Missileman Class A School convened its first class on 2 Jul 1956 at the Naval Air Technical Training Center, Memphis, Tenn. This class completed the school in December, and the graduates were designated as GF strikers. In addition, GF strikers were designated as a result of the August 1956 service-wide exams, and will be designated as a result of future exams.*—ED.

Last Shot of WW II?

SIR: I have heard several times that USS *Tigrone* (SSR 419) fired the last shot of WW II, on 13 August 1945, two days before V-J day. Is this true?—R. A. L., YN1, USN.

• *The Naval History Division (OP-29) informs us that to the best of present knowledge your information is correct. We should like to hear from anyone who has information of any later action against the enemy forces of WW II.*—ED.

Computing Sea Duty

SIR: I was transferred to sea duty from my last shore duty station on 11 Oct 1955. I reported aboard my ship on 4 Nov 1955. When BuPers Inst. 1306.20C came out in June 1956, my sea duty was computed from the time I reported aboard ship.

I contend that my sea duty should be computed from the time of my transfer from the shore station as it was under the old instruction. Can you clarify this for me?—R. V. K., HM1, USN.

• *Sea duty is computed in accordance with provisions of the most recent instruction, in this case, BuPers Inst. 1306.20C. The date in your case will be the day you reported aboard your ship, or 4 Nov 1955.*

Sorry our clarification doesn't support your contention.—ED.

Authorization to Take Exam

SIR: I am a seaman working with the deck division and would like to take the exam for storekeeper. Who makes the decision as to whether or not I will be eligible to compete in the service-wide examination for advancement?—K. J. W., SN, USN.

• *Recommendations for advancement in rating are made by your commanding officer. If he considers you qualified to perform the duties of an SK3 he will undoubtedly allow you to participate in the service-wide examination for that rate. You would be considered eligible for advancement, assuming that you have fulfilled all other eligibility requirements.*—ED.

Depends on How the Crow Flies

SIR: I have received two official answers to the same question which seem to be in conflict with each other.

The travel of a dependent from Saint Elmo, Ill., to Takoma Park, Md., was computed at 999 miles by Naval Accounts Disbursing Office, Bethesda. But from Takoma Park to Saint Elmo is 897 miles according to NADO Guam.

It seems to me that the distance between two given points of travel, based on the same official mileage tables, would be the same regardless of direction of travel.

Since this is the case, can you tell me which figure is correct, 897 or 999? —L. T. G., DTC, USN.

• *Chief, in these changing times nothing seems certain. Current official mileage from Saint Elmo, Ill., to Takoma Park, Md., as computed by the Passenger Rate Section of Navy Regional Accounts Office, Washington, D. C.,*

Invocation at Launching of Navy's Second Nuclear Sub

SIR: At the launching of *Seawolf,* who made the inspired invocation, "To peace, because the awful alternative is the end of all life' "?—A. M., Chicago, Ill.

• *LCDR Paul F. Bradley, CHC,* USN, *delivered the invocation at the launching of* USS *Seawolf (SS(N) 575) on 21 Jul 1955 at Groton, Conn. The last paragraph of Chaplain Bradley's prayer was: "Therefore, reverently we ask thee, O God, of the atom's laws and man's reason, to bless and guide them to life more abundant—to peace, because the awful alternative is the end of all life."*

When our researchers read the invocation delivered at the launching of Seawolf they found it need not be restricted to the launching of one ship, but has meaning for all Navymen. Because we think it is applicable to our concept of the "New Navy" is its reproduced here in full.—ED.

★ ★ ★

ALMIGHTY GOD: It would be a foolish thing for us to be other than simple and brief in the epochal circumstances under which we are here assembled. We wish simply to ask Thy blessing on forces which we do not yet fully comprehend. It is an hour for prayer, not rhetoric; for humility, not hauteur.

We have seen the power of Thy creation, O God. We have felt the earth shrug and have seen whole cities shudder and slip into rubble. We have seen lightning leap from angry skies to incinerate man and his works. We have seen bacteria, so minute as to challenge the most discerning lens, snowball into pain and plague and death. We have heard the volcano rumble and seen it spew out destruction. We have seen the forces of nature caught in test tubes, and have seen her metals hammered into blades and barrels and bombs in man's own plan and pattern of pain.

Today, O God, we ask you to look down on us with patience and compassion. This craft — this *Seawolf,* this capsule contrived of steel and secret structure — holds within its bulkheads the most awful culmination that man has yet derived from the potentials that Your creative hand pressed into the bins and closets of nature.

We are awed and chastened, O God, but we are not frightened — for is it not true that none of Thy handiworks is as great as Thee? We are not frightened so long as we dedicate this craft and the fearful forces that propel it to Thy glory to the protection of man's rights, to peace for all men.

And so again, with the simplicity that this occasion elicits, we acknowledge that all Thy gifts are good, and only by man's will can be bent to man's sorrow. Even the water and the air and earth and fire can be distorted and disastrous. The nightshade and the lovely poppy can bless or blight; the mind can love or hate.

Therefore, reverently we ask thee, O God, of both the atom's laws and man's reason, to bless and guide them to life more abundant — to peace, because the awful alternative is the end of all life.

is 845 miles. These changes occur from time to time in official mileage tables because mileage is computed on a basis of routes of carriers, rather than actual distance between points.—Ed.

Senior Medical Student Program

Sir: Before I came into the Navy I had finished two years of pre-medical school.

I've heard that there is some program that sends eligible men through part of their pre-med studies. Could you tell me who falls in the eligible class and how to apply for admittance?—G. A. B., HN, usn.

- *Sorry, the information you have isn't quite straight. Ever since the closing of the V-12 College Training Program in 1946, there hasn't been a Navy subsidized program for students attending pre-medical schools.*

The program that you have heard about is the present plan that offers financial aid to medical students in the Senior Medical Student Program. In order to be qualified for this you would have to be in the junior year of medical school and be accepted for the senior year in a school accredited by the American Medical Association.—Ed.

HILLS OF PAGO PAGO—Tin cans of Destroyer Division 112 wait for fuel lines in natural harbor of Pago Pago during good-will cruise in Pacific.

Naval Attache Duty

Sir: After being ordered to shore duty, I was informed that I had to serve at least six months of my shore duty before submitting a request for transfer. Does the same policy hold true for Naval Attache Duty requests? If so, what is the BuPers Instruction covering it?—J. F. T., ET3, usn.

- *The answer to your first question is yes.*

Here's how it works. In order to be eligible for Bureau controlled overseas billets, which includes Naval Attache Duty, you must be within six months of completing your normal tour of shore duty. If you were at sea you would have to have one year of continuous sea duty.

More information is available in BuPers Inst. 1306.6B.—Ed.

Warrant Designator Changing

Sir: I would like to change my warrant officer designator from Electrician (754) to Electronics Technician (766). Is this possible? If so, what procedure must I follow?—W. C., CWO, usn.

- *Yes, it's possible. Address your request for change to the Chief of Naval Personnel, via your commanding officer.*

Further information on this subject is available in BuPers Inst. 1120.18C and 1210.6.—Ed.

'B' is not for Butcher

Sir: Would you please help settle an argument? It concerns the old "Butcher's" rate. Some of my shipmates say that during World War II there was a "Butcher's Specialist" designated by a diamond with a "B" in the center. I contend that there has never been anything other than a crescent. Who is correct?—J. H. T., CS3, usn.

- *You are. During World War II there was a rating SC(B), Ship's Cooks—Butcher, to designate ship's cooks who were qualified to serve as butchers at large shore stations and on large ships. The insigne was the crescent. There has never been a "Butcher" rating, as such. The diamond with a "B" in the center was the insigne of the Master-at-Arms (Shore).*—Ed.

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Roundup on New Rotation Program

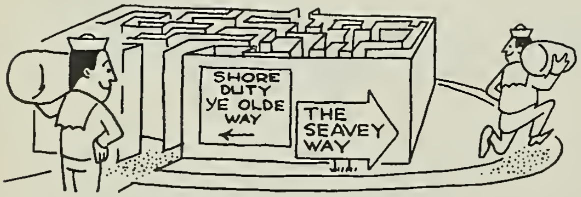
From Sea to Shore, and Back

A REVISED PROGRAM for shore-to-sea and sea-to-shore rotation of enlisted personnel is being placed into effect by the Chief of Naval Personnel.

Called the "Enlisted Career Rotation Program," the new system is an evolutionary change from past methods, and will affect every enlisted man in the Navy. On these and the following pages ALL HANDS presents a special report explaining the operations of this new rotation program.

Basic features of the new rotation program are the result of recommendations made after completion of intense study of current personnel problems by the Chief of Naval Personnel and the Fleet commanders. (See "Why Change the Enlisted Sea-Shore Rotation System?" on the next page). The fundamental purpose of this new program is to insure "the optimum assignment of career personnel with the ever present and ultimate aim of accomplishing the most effective deployment of men to the Fleets and operating forces of the Navy." The major objectives in this new program are:

- To provide the Fleets with a maximum number of refreshed and effective people.
- To provide procedures which insure the maximum advantages in rotation to all the Navy's long term personnel.
- To provide the highest possible stability in personnel to the operating forces, and to the people involved.
- To provide a means of insuring that all long term personnel receive their share of that duty which is compatible with normal life after periods of arduous duty.
- To provide the best opportunity for each individual to plan for his future with a reasonable degree of assurance.


SHORE DUTY YE OLDE WAY
THE SEAVEY WAY

- To provide personal attention to each individual on rotation and insure that the benefits accrue to men of meritorious long service when relieved by personnel who have completed their tours ashore.

The program is divided into two major procedures. These are:

The Shore Survey—The "Shorvey" is the method by which enlisted personnel completing a normal tour of duty ashore are *rotated to sea duty*. This part of the Career Rotation Program has been in effect for several months, and is now being joined by the Seavey to complete the program.

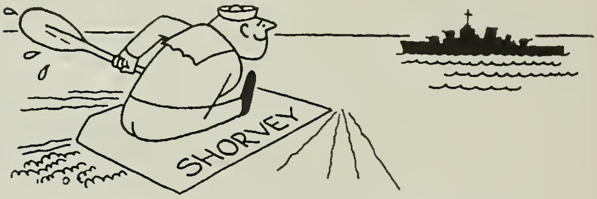
The Sea Survey—The "Seavey" is the procedure by which personnel completing a tour at sea are *rotated to shore duty*. This part of the Career Rotation Program is being placed in effect, in stages, during 1957 and 1958. By June 1958 all enlisted ratings will be under the Seavey. The Seavey replaces the Shore Duty Eligibility Lists (SDEL) method of rotating enlisted personnel.

THE SHORVEY

The Shorvey is the procedure by which personnel are assigned to sea duty upon completion of a prescribed tour of duty ashore. Rules governing the operation of the Shorvey are contained in BuPers Inst. 1306.21B. The Shorvey provides an efficient means by which all personnel are given equitable treatment upon reassignment after completion of their normal tours ashore. It makes readily available to personnel distributors a large amount of valuable information on each man all of which is important when making assignment decisions.

STEPS IN THE SHORVEY PROCEDURE

Approximately 12 months before completing your normal tour ashore you will be required to complete a rotation data card, listing your preferences for next duty and other information. (See illustration page 34). This card is initiated by the appropriate district or Fleet PAMI (Personnel Accounting Machine Installation) and forwarded to your station CO for you to complete.



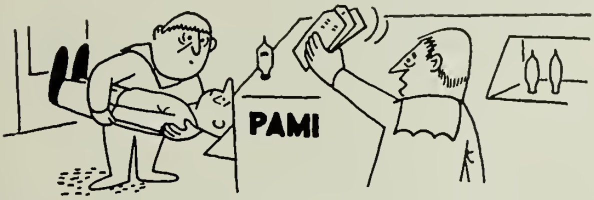
After your completed rotation data card has been returned to the proper PAMI, the information it contains is compiled with other information on you which is on file at the PAMI, converted to punched card codes and symbols and transmitted by data transceiver or airmailed as data cards to the Bureau. These data cards are placed on file, by rating, to form the SHORVEY. Personnel are made available from the SHORVEY to the Atlantic and Pacific Fleet commanders for further assignment. The Shorvey is the primary source of skilled personnel for manning the Fleet.

Approximately four months before your rotation tour date (the month you complete your prescribed tour of shore duty—see box page 31), if you have at least six months' obligated service you will receive a transfer directive directing your transfer in a specific month (normally the month you complete your prescribed shore tour). This transfer directive will be in the form of a data card issued by the Bureau and will direct your CO, upon receipt of your assignment card from the appropriate Fleet distributional commander, to issue a standard transfer order transferring you to the activity named. Thirty days leave is usually authorized.

Normally, personnel completing a tour of shore duty are assigned to duty afloat and not to other shore duty or overseas service. However, a considerable number of personnel are sent to advanced school between completion of a tour ashore and reassignment to sea. When completing your rotation data card you may indicate a preference for a school and if you meet the qualifications and are recommended by your CO, this will be reflected in the data cards. Consideration will be given to all such school preferences indicated, consistent with availability of quotas.

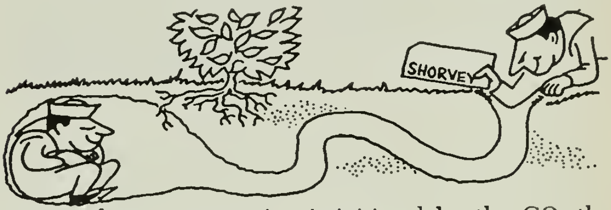
After you have been assigned a duty station, the distribution commander making this assignment forwards the assignment card to your current CO, informing him where you are to be transferred. This distribution commander also forwards your deck of data cards on to your next duty station so they may look over your qualifications in advance and decide what billet you are best qualified to fill.

The deck of four Shorvey data cards on each individual is forwarded by the Bureau to the Fleet distributional commander to whom the individual has been made available for assignment. All the information on these cards is used in making assignment decisions. Two weightiest factors in assignment priority are length of naval service and history of past duty. Every attempt is made to assign personnel to the duty of choice.



EXTENSIONS OF SHORE DUTY

Requests for extension of shore tours must be submitted to the Chief of Naval Personnel in letter form via your chain of command and, if initiated by you, the CO and distribution commander are expected to make a positive recommendation for approval or disapproval. Non-committal endorsements are not desired. If the request for your extension is initiated by the CO, the distribution commander is expected to make a firm recommendation for approval or disapproval.



Extensions of shore duty are granted only on the basis of urgent manning problems or personal hardships which might be created by the normal rotation of a particular individual. Fleet commanders have authority to grant under these circumstances, without reference to the Bureau, extensions of not more than one year to personnel serving on Fleet shore duty.

THE SEAVEY

The long planned and much discussed Seavey phase of the Navy's Career Rotation Program was announced by BuPers Inst. 1306.62. It will modernize and standardize the procedure for rotating enlisted personnel from sea duty (including overseas service) to shore duty (including Fleet shore duty) within the U.S.

Why Change the Enlisted Rotation System?

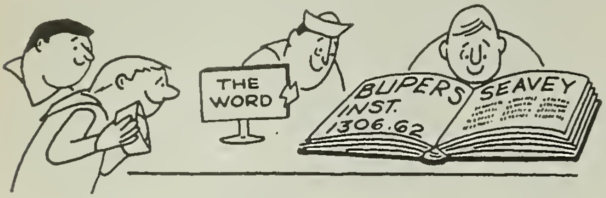
Lengthy study of the present Navy-wide system of assigning enlisted personnel to sea and shore duty was made before the new Career Rotation Program was adopted. The long range effects of programs affecting duty assignments, such as the reenlistment options, were reviewed, along with an examination of the voluntary application-for-shore-duty plan that has been in use for the past several years.

General conclusions indicated that the present system "did not adequately meet the desired objectives" of a career rotation program. Unsatisfactory aspects of the system included:

- ***Too Many Waiting Lists.*** In addition to the BuPers Shore Duty Eligibility List (*SDEL*), several Fleet shore duty waiting lists are maintained in each Fleet. Under these circumstances one man can receive orders to shore duty earlier than a more deserving person solely because of the particular list he selects.
- ***No Control over Applications for Specific Areas.*** No limit is currently set on the number of men who can apply for a particular geographical area, despite an obvious limit on the number of men who can actually be assigned to any particular area. This results in very long periods of waiting for certain of the more popular areas and undesirable alternatives in order to man naval activities in areas apparently considered less desirable. Such alternatives include "drafting" the Fleets, leaving personnel ashore over tour indefinitely, and leaving billets vacant.
- ***Precedence Keeps Changing on Waiting Lists.*** The constantly changing priority of an individual on the SDEL or Fleet Shore Duty Waiting Lists makes it impossible to predict with any degree of accuracy when a man will be ordered to shore duty. If someone comes on the list with more sea duty, the entire picture changes and the past list is no longer accurate.
- ***Lack of Long Range Plans.*** The SDEL and Fleet lists permit a maximum of three months' advance notice to you, and to interested commands, of your scheduled movement. This is insufficient time to plan for orderly replacements and often means that internal readjustments have to be made hastily.
- ***Standards for Priority in Your Reassignment.*** The priority on the SDEL and Fleet waiting lists up to now has been based on the amount of continuous sea duty a man has compiled *since last serving a tour ashore.* This system does not take into consideration that "Man A" may have served an extraordinarily high percentage of his naval career at sea whereas "Man B" may have served only a small percentage of his career at sea, yet have accumulated more continuous sea duty since his last tour ashore than "Man A." Under the SDEL system "Man B" has the higher priority for his duty preference and would be ordered ashore earlier than "Man A."

The new Career Rotation Program is designed to correct these and many other inequities.

Hereafter, all enlisted personnel except Waves, aviation pilots, machine accountants, air controlmen, musicians, tradevmen and communications technicians will be rotated from sea to shore by means of the Seavey.

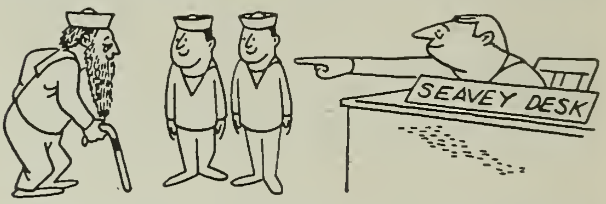


These rates are rotated under special procedures. Airmen, firemen, seamen, construction men and all personnel in pay grades E-2 and E-1 are not included in the Career Rotation Program. Such personnel are assigned to meet the needs of the service.

Through the Seavey, personnel will be selected and ordered to shore duty by the Chief of Naval Personnel from a single list consisting of all rates who have completed their prescribed tour of sea duty.

Under the present, outgoing program, selections for shore duty have been made from numerous waiting lists. This system was very inequitable as some individuals could receive orders long before more deserving persons who had more naval service and had served longer at sea. This was because personnel were being ordered ashore from a number of waiting lists, with some lists operating much faster than others.

Under Seavey this unjust system will no longer exist. All personnel who have completed their tour of sea duty will be considered with their contemporaries in their rating for all the vacancies which will exist ashore. Hereafter, persons with the greatest length of service will be given first preference in regard to their choice of duty. Each additional year of service will place you higher on the list for priority consideration. Personnel with 17 or more years of service will be given top priority in all assignments. This new policy gives career service its rightful significance in regard to assignments.



Past practices which resulted in the bunching of benefits at the time of reenlistment are altered by the Seavey. Under the new plan, benefits will accrue to you on an orderly basis, spread throughout your naval career. *The reenlistment options and choices of duty now available on reenlistment under BuPers Inst. 1306.-25C will be canceled on 1 Feb 1957.* Those preferences

Here's the Word on Seavey-Shorvey Lingo

Here are definitions of phrases commonly used in connection with sea/shore rotation:

- ***Sea Duty***—Applies to personnel assigned to Fleet units, ships, staffs and squadrons that are home-ported in the Continental United States or overseas, operating at sea for extended periods or subject to deployment. The term also applies to duty in ships or units of the Continental Commissioned Vessel Program under the control of district commandants, river commands and the Naval Air Training Command, as well as with activities of the naval establishment shore-based outside the Continental U. S. In addition, certain units or activities which are based ashore on either a full or part time basis, have been classified as sea duty by the Chief of Naval Personnel and the Fleet commanders.
- ***Shore Duty***—Duty in an activity of the naval establishment based ashore within the Continental U. S. (All shore duty assignments will be made by the Bureau through SEAVEY.)
- ***Fleet Shore Duty***—Duty ashore in an activity in the Continental U. S. which is under the control of Fleet commanders. (Although the activity itself is controlled by a Fleet commander, assignment of personnel to Fleet Shore Duty will be made by the Bureau via SEAVEY.)
- ***Overseas Service***—Duty with activities shore-based outside the Continental United States, and duty in ships, staffs, and units home-ported overseas which do not operate extensively away from the home port. Overseas service is under the general classification of sea duty for rotational purposes, but it is a special type of sea duty because a normal tour is prescribed for the area.
- ***"For Duty"***—Applies to personnel ordered to a particular command to meet current manning requirements. (Personnel ordered 'For Duty" are not assigned through a regularly established rotation plan or waiting list.)
- ***Normal Tour of Duty***—The prescribed period of time in which a person can expect to be assigned to a specific area. (Personnel will be selected for a normal tour of shore/sea duty by means of SEAVEY or SHORVEY.)
- ***Commencement of Sea Duty***—A tour of sea duty commences on the date of reporting to the first duty or temporary duty station in a naval unit or activity classified as sea duty. Where travel must be performed by government or commercial transportation outside the Continental U. S. to report to duty or temporary duty classified as sea duty (including overseas service), a tour of sea duty shall commence on the date of departing from the Continental U. S.
- ***Termination of Sea Duty***—A continuous tour of sea duty is considered terminated under the following conditions:

(1) Separation from active naval service for more than three months.

(2) Duty in an activity classified as shore duty for more than six months, whether on duty, temporary duty or temporary additional duty, *except* duty, temporary duty, or temporary additional duty under instruction in a naval school where the individual reports to the school from a unit or activity classified as sea duty and returns to sea duty upon successful completion of the course of instruction.

(3) Upon transfer to a naval prison, brig, or retraining command on sentence of a court-martial.

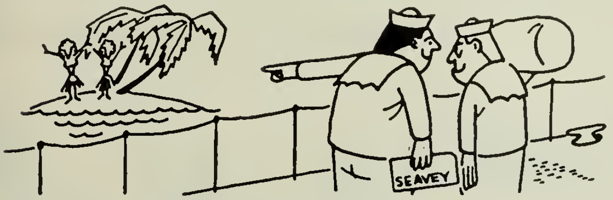
compatible with a career rotation program are incorporated within the Seavey and Shorvey for career personnel.

One of the ill effects of the reenlistment option plan was the chain reaction of unplanned movements when an individual suddenly decided to elect an option that resulted in his immediate reassignment. Loss of the man could not be anticipated, and no advance, orderly planning was possible. It usually resulted in readjustment of manpower within the force, or urgent demands for additional personnel to be made available from sources outside the force to cover shortages. This inevitably caused hasty transfers in which the men involved were not allowed sufficient time for orderly planning. Hasty, unplanned movements of people are considered costly and inefficient, and usually result in damage to the morale and career motivation of the people involved.

The Seavey is designed to give each person, during his career, his share of that duty he may consider desirable. As a career man, you will be rotated between sea and shore duty in an orderly manner, and be given equitable opportunity for assignment to your duty choices.

One of the major advantages of the Seavey concept is that it permits better advance planning. You will know in advance how long you must serve on your sea tour, when you will be transferred ashore, and how long you will serve ashore on your normal tour. Personnel distribution commanders will know the name of each man to be ordered ashore about 15 months in advance. This will enable them to order replacements well in advance. Such advance planning will reduce much of the internal readjustment so often caused by unexpected transfers.

Under Seavey, you will normally be ordered ashore within 12 months after the effective date of the Seavey segment for your rate. (See segment schedules on page 35).



Seavey will utilize new techniques of processing data. This will include the use of a series of data cards with information being relayed electronically. You will know when you will go on the Seavey by the arrival aboard of your rotation data card from the Personnel Accounting Machine Installation (PAMI). This card will be used to record your next duty preferences. These preferences and a greatly expanded volume of other information about you will permit personnel distributors to give more personal attention in making your reassignment.

In addition to the added personal attention and equitability of the new rotation program, the Seavey will also insure you of greater stability This is because normal transfers to other duty will be stopped once an individual is placed on the Seavey. Under normal circumstances the only way a person will be reassigned once he is on the Seavey is by getting a Bureau transfer directive to shore duty or overseas service, or for humanitarian reasons. This will eliminate frequent transfers and the possibility of multiple moves within a fiscal year as well as unnecessary reassignments for short periods of time.

How Long Is a Shore Tour?

The normal tour of Shore Duty (including Fleet Shore Duty) for personnel ordered ashore under SEAVEY is:

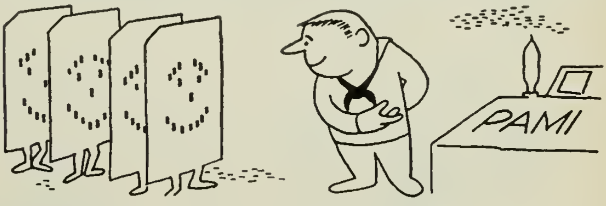
- **THREE YEARS**—For HMC, HM1, DTC, DT1 and all YN, PN, JO, AC, TD of pay grade E-4 and above, and all personnel assigned to *Instructor duty* by the Chief of Naval Personnel.
- **TWO YEARS**—For personnel of all ratings in pay grade E-4 and above. In addition to the rated personnel, AN/AA, HN/HA, and DN/DA rates.
- **18 MONTHS**—For all personnel in pay grades E-3 and below.
- **15 MONTHS**—For all USN personnel, regardless of rate, (Except AN/AA, HN/HA, and DN/DA) who were assigned to shore duty from recruit training, or from a class "A" or "P" school and have never served at sea. The 15-month tour will be counted from the commencement of recruit training or school whichever is earlier.
- **12 MONTHS**—For all USNR or USN-S personnel regardless of rate, (Except AN/AA, HN/HA and DN/DA) who were assigned to shore duty from recruit training, class "A" or "P" school, and have never served at sea. The 12-month tour will be counted from the commencement of recruit training or school whichever is earlier.

The over-all flexibility of Seavey gives the required capacity and speed in the distribution system in case of a national emergency. It will also enable the ready availability of personnel data required for special assignments and new construction.

INITIAL SEAVEY SUMMARY

The first phase of Seavey will get underway during January 1957. It will begin by recording the commencement of sea tour dates for every enlisted man who was serving on sea or overseas duty as of 30 Dec 1956. This recording will be entered in each person's service record and in the personnel accounting system.

Individual commands are required to begin compiling the sea duty commencement dates as soon after 1 Jan 1957 as possible but not later than 23 January. This information will be mailed to reporting PAMI as soon as it is compiled but no later than 15 Feb 1957.

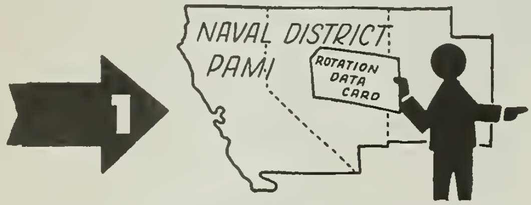


The PAMIs will record this information in your status card. Summaries are broken down by rate and will include the number of personnel, and the month and year they began their current tour of sea duty. They will also list obligated service. PAMIs will transmit the

(continued on page 35)

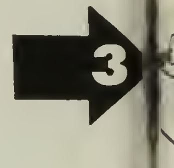
SHORVEY

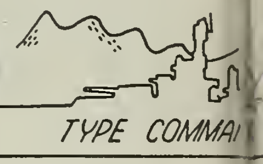
SHORVEY... moving



Approximately 12 months before completing your normal tour of shore duty, the District PAMI (Personnel Accounting Machine Installation) forwards your rotation data card to your station and instructs your CO to interview you in regard to your choices of sea or overseas duty.

You are called to personnel office and, with personnel man's assistance, you fill out your rotation data card listing your choices for next sea or overseas duty. Your rotation data card is then returned by the fastest means to the District PAMI.





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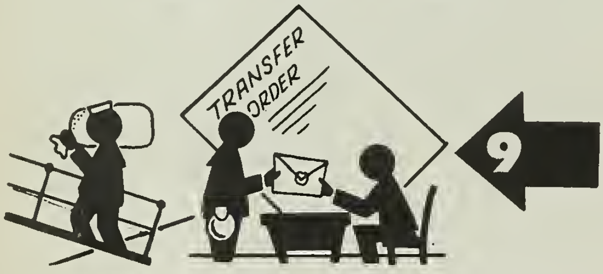
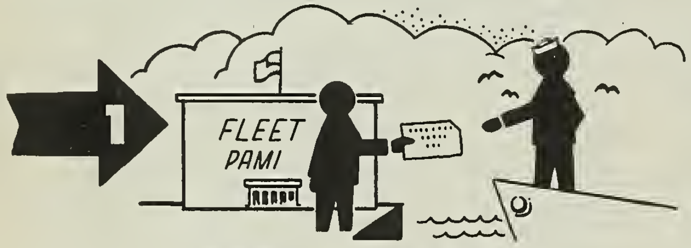
After determining your next duty assignment, the type commander forwards the assignment card to your present shore station. At the same time your "deck" of data cards is forwarded to your next sea duty station to assist your next CO in placing you in the right job.



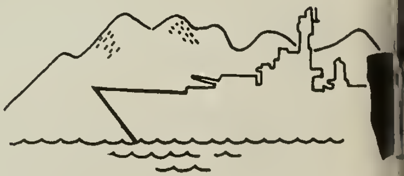
Upon receipt of your assignment card, the shore station will issue standard transfer orders for detachment during a specified month (normally the month in which you complete a tour ashore). You will then be directed to the assigned sea duty, and your orders will authorize proceed and travel time, as well as leave.

SEAVEY... moving



Upon completion of your tour of sea duty, the Fleet Personnel Accounting Machine Installation (PAMI) will send your rotation data card to your ship or overseas station. This card will notify you that you have completed the required tour at sea for your rate and that you are being placed on the SEAVEY, and that you can expect orders to shore duty within the next 3 to 15 months.

You are then called to the personnel office where, with the personnel man's assistance, you indicate on the rotation data card your shore duty and/or overseas duty preferences. You may also indicate that you desire recruiting duty and/or instructor duty. Your rotation data card is reviewed by your CO and then forwarded by fastest means available to the Fleet PAMI. An entry to this effect is made in the ship's daily diary.



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Upon receipt of your assignment card, your ship will issue standard transfer orders for detachment during a specified month and you will be directed to report to your shore duty station. Your order will authorize proceed, travel time and leave.

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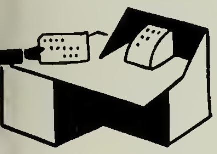
d SEAVEY

from shore to sea



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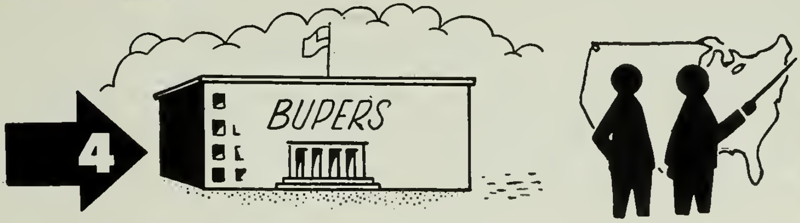
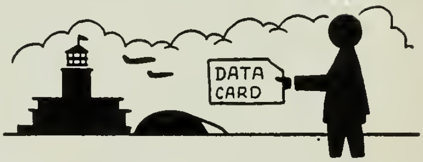
lly by transceivers to the Bureau.



Using all information from your "deck" of data cards (which the Bureau assembled into the SHORVEY), Bureau assignment officers make you available to either the Atlantic or Pacific Fleet Service Force commander for further assignment to sea or overseas duty. This action takes place about four months prior to completion of your normal tour ashore. Some personnel on the SHORVEY are assigned to schools or to Bureau controlled activities. The information on your assignment card and your data card is then relayed by transceiver to the appropriate Service Force commander to assist him in assigning you to a Fleet command.



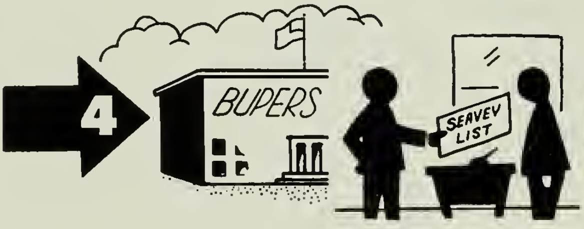
The Bureau sends, via the District Commandant, a copy of the No. 1A data card to the shore station where you are serving. This card tells the District Commandant he is losing a man from an activity under his jurisdiction and notifies you and your CO of the month you will be transferred. It also tells you the Service Force commander to whom you have been made available for further assignment. Your No. 1A data card authorizes your CO to effect your transfer when your ultimate duty assignment is received.

When the Service Force commander receives your assignment card and "deck" of data cards from the Bureau (Step 4 above), he uses all this information to make a decision as to the type of ship or other Fleet command to which he will make you available for further assignment. The Service Force commanders also assign personnel to overseas activities.

makes you
gnment, he
k" of data
commander
s to deter-
assign you.

from sea to shore

At the Fleet PAMI the information on your rotation data card is added to other information about you that they have on file and is converted to punched card symbols and codes. Then, by means of transceivers, this information is transmitted electronically to the Bureau.



At the Bureau the names received from the Fleet PAMIs are compiled into a single SEAVEY list by rate and length of naval service. From this list assignment officers will select personnel for all types of shore duty. They will use your "deck" of data cards to aid them in deciding where you will be assigned. (Fleet personnel officers will be furnished a listing of those men who have indicated overseas duty as their primary choice.)

Upon determining where you will be assigned, the Bureau sends your assignment card and "deck" of data cards to the appropriate District Commandant, CNATRA or Fleet commander. Upon receiving these cards, the shore personnel distributor will then assign you to a specific activity under his control for a normal tour of shore duty. At the same time the assignment cards are mailed by the Bureau to the shore duty personnel distributors, and duplicate copies of your No. 1A data card are mailed direct to your ship and to your Fleet commander. The No. 1A cards authorize your transfer and inform your CO of the month your transfer is to be effected. They also notify the Fleet commander that a replacement for you will be needed.

fic duty station, forward
r assignment card to your
in assigning you to that
ard your ship receives is
ecific duty station ashore.

Examples of how to fill in your Rotation Data Card

SEAVEY ROTATION DATA CARD

Home port numbered codes here indicate that Jones desires shore duty within the continental U. S. In the Seavey home port codes represent broad type of duty preferred.

Lettered codes for cities where Naval activities are located, such as
KSD—San Diego
LSF—San Francisco
MSE—Seattle
Jones indicates in these blocks his location preferences for shore duty.

Identifying information: name, rate, etc., punched and printed by PAMI.

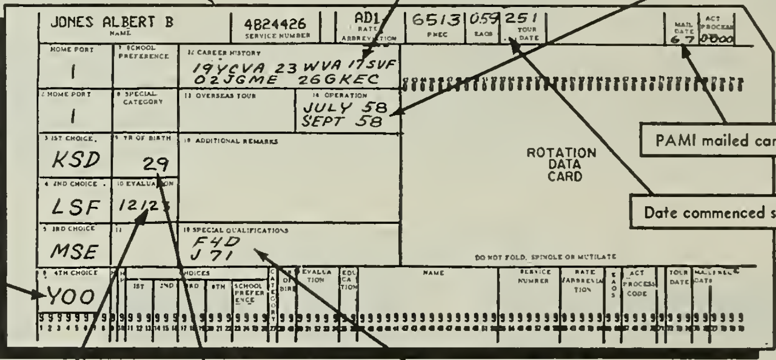
CAREER HISTORY

Covers approximately 10 years' naval service. Numbers indicate period served on board ship or station. When this card was submitted for Jones, he was attached to a CVA. The first code indicates that he has served on board 19 months. His CVA is based in "Y" San Diego. Before this he was attached to an attack squadron based in San Francisco.—etc.

OPERATION

Jones' CO has indicated here that the ship will be operating on a heavy schedule and that Jones' services are urgently required from July through September.

JONES indicated in 4th choice he would like duty "anywhere west of Mississippi." For circumstances under which an overseas activity may be indicated in the 4th choice spot, see basic Seavey article in this issue.


JONES ALBERT B
NAME
4824426
SERVICE NUMBER
AD1
RATE ABBREVIATION
6513
PNEC
059
EAOS
251
TOUR DATE
67
MAIL DATE
0000
ACT PROCESS
1 HOME PORT: 1
2 HOME PORT: 1
3 1ST CHOICE: KSD
4 2ND CHOICE: LSF
5 3RD CHOICE: MSE
6 4TH CHOICE: YOO
7 SCHOOL PREFERENCE:
8 SPECIAL CATEGORY:
9 YR OF BIRTH: 29
10 EVALUATION: 12123
12 CAREER HISTORY: 19YCVA 23WVA 17SVF 02JGME 26GKEC
13 OVERSEAS TOUR:
14 OPERATION: JULY 58 SEPT 58
15 ADDITIONAL REMARKS:
16 SPECIAL QUALIFICATIONS: F4D J71
ROTATION DATA CARD
DO NOT FOLD, SPINDLE OR MUTILATE

PAMI mailed card this date.

Date commenced sea tour.

EVALUATION CODE

Filled in by Jones' CO. BuPers Inst. 1616.4 covers procedures for evaluating personnel. Evaluation shown here taken from enlisted performance record and converted to code. "1" represents outstanding, etc.

Born 1929.

SPECIAL QUALIFICATIONS

Jones is a qualified jet mechanic. Other qualifications might be "fuel," "AEW," etc.

SHORVEY ROTATION DATA CARD

When Smith goes to sea he wants to be based in Norfolk. However, if he can't have the East Coast, then he prefers a West Coast ship based in San Diego.

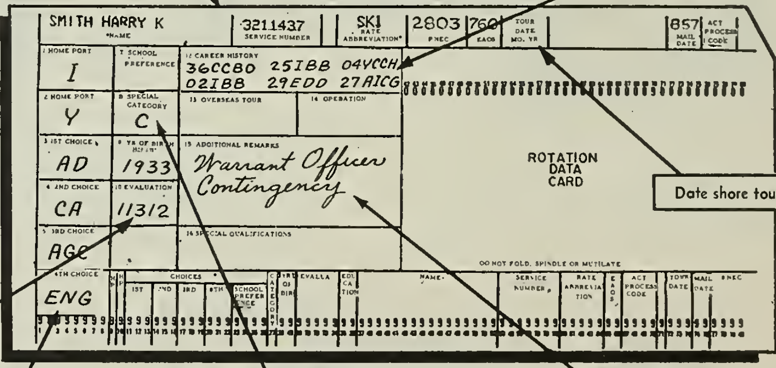
Identifying information: name, rate, etc., punched and printed by PAMI.

CAREER HISTORY

At the time of submitting the rotation data card, Smith was attached to an activity in Boston. The special category code (3rd digit "C") indicates he was an instructor. Before this he served in a battleship based in Norfolk. Also his career history indicates while on board the BB he was patient at the USNH Chelsea.

DUTY CHOICES

For sea duty Smith wants an AD, CA, or AGC in that order.


SMITH HARRY K
NAME
3211437
SERVICE NUMBER
SK1
RATE ABBREVIATION
2803
PNEC
760
EAOS
TOUR DATE MO. YR
857
MAIL DATE
ACT PROCESS CODE
1 HOME PORT: I
2 HOME PORT: Y
3 1ST CHOICE: AD
4 2ND CHOICE: CA
5 3RD CHOICE: AGC
6 4TH CHOICE: ENG
7 SCHOOL PREFERENCE:
8 SPECIAL CATEGORY: C
9 YR OF BIRTH: 1933
10 EVALUATION: 11312
12 CAREER HISTORY: 36CCBO 25IBB 04YCCH 02IBB 29EDD 27AICG
13 OVERSEAS TOUR:
14 OPERATION:
15 ADDITIONAL REMARKS: Warrant Officer Contingency
16 SPECIAL QUALIFICATIONS:
ROTATION DATA CARD
DO NOT FOLD, SPINDLE OR MUTILATE

Date shore tour expires

EVALUATION CODE

Filled in by Smith's CO. BuPers Inst. 1616.4 covers procedures for evaluating personnel. Evaluation shown here taken from enlisted performance record and converted to code. "1" represents outstanding, etc.

SPECIAL CATEGORY

Indicates Smith is on recruiting duty.

Smith has been selected for warrant grade and his CO wishes to bring this to the attention of the distribution officers.

OVERSEAS CHOICE

If he must go overseas, he wants to go to England.

Key step in SEAVEY/SHORVEY Rotation Program is filling out your rotation data card aboard your activity. Information from these cards is used in making all sea and shore assignments.

For breakdown of full meaning of all codes used see BuPers Inst. 1306.58A.

Prepared by ALL HANDS Magazine

January 1957

(continued from page 31)

summaries to the Bureau by means of transceivers, before 1 Apr 1957.

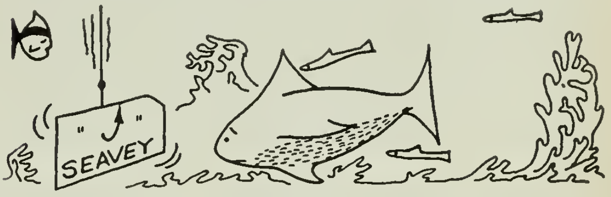
YEARLY SUMMARIES TO BE MADE BY RATE SEGMENTS

After the initial summary, similar summaries will be made thereafter each year according to three Seavey "segments" (that is, division of the Navy's total enlisted personnel strength into three groups by rating) and each group will be moved within a particular time record according to the schedule outlined on this page.

SEA TOURS

Sea tours will be established in such a manner that the number of personnel on the Seavey in each rate will equal the requirements for replacements ashore during the coming year. By this controlled system, personnel serving afloat or overseas who have been placed on the Seavey will know that they will be rotated ashore within the coming 12 months after the effective date. This information will also be available to their COs and distributional commanders. Specific transfer directives will be issued at least three months before the date of transfer.

Rotation data cards will be mailed out by the PAMIs yearly, by rate segments, to those personnel completing their established tour of sea duty. The cards will be sent to the respective COs of personnel concerned. When these rotation data cards are received, you will be interviewed by a qualified officer or senior petty officer. During this interview, you will verify your qualifications and other information on the rotation data card, and record your next duty preferences.



OVERSEAS SERVICE

Many persons would like overseas service before a normal tour of shore duty, and the Seavey makes this possible. If you desire a tour of overseas service before assignment to shore duty in the continental U.S., you should indicate this on your rotation data card. You can request any overseas area, regardless of the Fleet

You Belong to a Segment — You Can Plan Ahead

THE SEAVEY system of ordering personnel from sea to shore duty will be administratively handled on an annual basis according to three segments broken down by various ratings or rates. That is, men in the same segment will be processed within the same time period. These are:

SEGMENTS	RATINGS OR RATES
1	BM, QM, RD, SM, SO, TM, GM, FT/FC, MN, ET, IM, OM, TE, RM, YN, PN, SK, DK, JO, LI/PI, DM, and GS
2	CS, SH, MM, EN, MR, BR, BT, EM, IC, ME, FP, DC, PM, ML, SV, CE, CD, CM, BU, SW, UT, SD and TN
3	AD, AT/AL, AO, AB, AE, AM, PR, AG, AK, PH, GF, AQ, HM, HN, DT and DN

SN, FN, CN, AN and personnel of pay grades E-2 and E-1 are not incorporated in the Seavey.

- The initial Seavey for each rating segment will commence on the following dates:

Segment Three — 1 Oct 1957
Segment Two — 1 Jun 1958
Segment One — 1 Feb 1958

All shore duty eligibility lists for the rates within each segment will be cancelled on these dates. A new Seavey will commence each year for each segment on the anniversary of these dates.

Note that the dates shown above are the *effective* date of the particular Seavey segment. That is, these are the dates distribution commands start issuing transfer orders (and all personnel listed on the Seavey for a particular segment *must* be transferred within the following 12 months of the effective date). Action on Segment Three, for example, began just after the compilation of the Fleet summary of sea duty by ratings (which began on 1 Jan 1957 and is scheduled to be completed by 15 Feb 1957). On 1 Mar 1957 the Fleet PAMIs commence transmitting the completed Fleet summary of ratings to the Bureau, and are scheduled to complete it by 1 April. On approximately 1 May 1957 the chief of Naval Personnel expects to issue a Notice establishing sea tour dates for all ratings of Segment Three. The Fleet PAMIs will mail all the Segment Three rotation data cards to commands by 15 Jun 1957 and all commands must complete and return the rotation data cards to the PAMI by 15 July. The PAMIs then convert the information on the rotation data cards and other information on file into punched cards, which will be transmitted to the Bureau not later than 1 Sep 1957. On 1 Oct 1957, the effective date of the Seavey for Segment Three, the Bureau begins issuing transfer directives for all ratings in Segment Three under the Seavey method.

Here is how all three segments will be placed in operation and the annual schedule for each segment.

SEAVEY'S ANNUAL SEGMENT SCHEDULES

Action	Segment 1	Segment 2	Segment 3
PAMIs commence Fleet summary of segment	1 Jul	1 Nov	1 Mar
Fleet summary due in BuPers	1 Aug	1 Dec	1 Apr
BuPers Notice establishing commencement tour dates for SEAVEY	1 Sep	1 Jan	1 May
Rotation data cards mailed to commands from PAMIs by	15 Oct	15 Feb	15 Jun
Limiting date for commands to mail rotation data cards back to PAMIs	15 Nov	15 Mar	15 Jul
Date SEAVEY data cards due in BuPers	1 Jan	1 May	1 Sep
Effective Date of SEAVEY— START ISSUING TRANSFER ORDERS	1 Feb	1 Jun	1 Oct

you are currently serving in. Assignments overseas are restricted to the area of your preference.

If you desire service anywhere overseas as an alternate in the event you cannot be assigned to one of three specific naval districts of your preference in the continental U. S., you should also indicate this on the card. If assigned to overseas service, you normally will be ordered ashore in the continental U. S. upon completion of your overseas service tour.

INSTRUCTOR, RECRUITING AND GENERAL SHORE DUTY

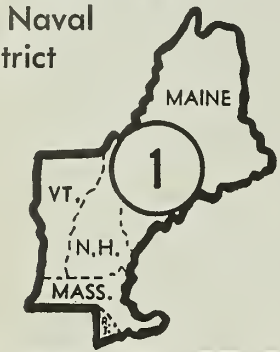
Personnel who do not desire overseas service should indicate that they want shore duty only. Three special selections are available for those desiring shore duty. These include instructor or recruiting duty or both, as well as general shore duty. If you indicate a desire for either recruiting or instructor duty or both choices, you must be qualified and recommended by your CO.

Personnel desiring instructor or recruiting duty and who are recommended for such should indicate their choice of duty as to the cities where schools or NROTC

If You Plan to Drop Anchor in Continental U. S., Check These

Are you curious as to what kind of shore duty the Navy offers in your favorite city? On these and the following pages are tables showing cities where naval activities are located. Anchors indicate presence of a specified type of unit.

1st Naval District



	Recruiting Station	NROTC	NAS/Naval Air Activity	Receiving Station	Supply/Disbursing Activity	Naval Station	Naval Reserve Training Cen.*	Service Craft Activity	Construction Battalion Cen.	Recruit Training Center	School Command/NATTU	Naval Hospital/Med. Act.	Reserve Fleet	Amphibious Base	Communications/Radio Sta.	Fleet Training Center	Ordnance Depot/activity	Indust. Mgr. Off.	Intelligence Office	Navy Department Act	Flag Off. Staff	BAR/BAMR	Retraining Command	Hydrographic Office	Shipyard	Other
Augusta, Me.							⚓																			
Bangor, Me.							⚓																			
Boston, Mass.	⚓		⚓	⚓	⚓	⚓	⚓						⚓		⚓			⚓		⚓	⚓			⚓	⚓	
Brunswick, Me.			⚓																							
Buzzards Bay, Mass.		⚓																								
Castine, Me.		⚓																								
Chelsea, Mass.												⚓														
Cambridge, Mass.		⚓																								
Davisville, R. I.			⚓						⚓												⚓					
Hanover, N. H.		⚓																								
Hingham, Mass.							⚓										⚓									
Jamestown, R. I.															⚓											
Medford, Mass.		⚓																								
Melville, R. I.			⚓																							
Newport, R. I.					⚓	⚓	⚓	⚓			⚓	⚓			⚓	⚓	⚓									⚓
Portland, Me.	⚓																									
Portsmouth, N. H.						⚓	⚓					⚓	⚓										⚓		⚓	
Providence, R. I.		⚓					⚓						⚓													
Quonset Point, R. I.			⚓		⚓																					⚓
Salem, Mass.							⚓						⚓													
South Weymouth, Mass.			⚓																							
Springfield, Mass.	⚓						⚓																			
Squantum, Mass.															⚓											
Winter Harbor, Me.															⚓											
Worcester, Mass.		⚓					⚓																			

*Naval Reserve Training Centers are also located in the following cities: MASSACHUSETTS: Brockton, Fall River, Lawrence, Lowell, Lynn, New Bedford, Pittsfield. VERMONT: Burlington. NEW HAMPSHIRE: Manchester. R. I.: Pawtucket, Woonsocket. MAINE: S. Portland.

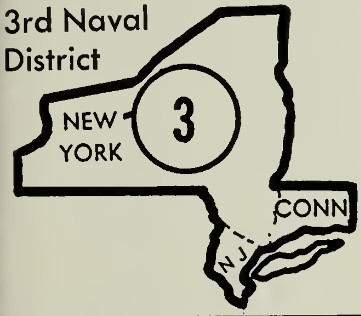
activities or main recruiting stations are located (see the charts below). The type of billet assigned will depend upon vacancies and individual qualifications. Personnel not selected for instructor or recruiting billets will be assigned to other types of general shore duty.

Personnel selected for instructor duty must have a minimum of three year's obligated service at the time of transfer, while those selected for recruiting duty must have a minimum of two years.

MISSION AND MAAG DUTY

In addition to the overseas service and the three choices of shore duty, you may also indicate your preference for mission or MAAG duty. Persons desiring such duty must (1) volunteer, (2) be recommended by their commanding officer, and (3) be qualified in all respects for the duty selected. The type of duty assigned will depend upon vacancies and individual qualifications. Personnel not selected for mission or MAAG billets will be assigned to other types of over-

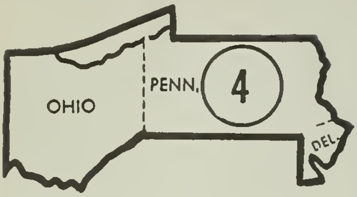
arts Showing Types of Naval Activities and Their Locations



	Recruiting Station	NROTC	NAS/Naval Air Activity	Receiving Station	Supply/Disbursing Activity	Naval Station	Naval Reserve Training Center*	Service Craft Activity	Construction Battalion Center	Recruit Training Center	School Command/NATTU	Naval Hospital/Med. Act.	Reserve Fleet	Amphibious Base	Communications/Radio Sta.	Fleet Training Center	Ordnance Depot/activity	Shipyard	Indust. Mgr. Off.	Intelligence Office	Navy Department Act.	Flag Off. Staff	BAR/BAMR	Retraining Command	Hydrographic Office	Other
Albany, N. Y.	⚓						⚓																			
Bayonne, N. J.					⚓						⚓		⚓					⚓								
Bethpage, N. Y.																							⚓			
Binghamton, N. Y.							⚓																			
Bloomfield, Conn.																							⚓			
Bridgeport, Conn.							⚓																			
Bronx, N. Y.		⚓					⚓																			
Brooklyn, N. Y.			⚓	⚓	⚓	⚓	⚓				⚓	⚓						⚓								⚓
Buffalo, N. Y.	⚓						⚓																⚓			
Dover, N. J.			⚓																				⚓			
East Hartford, Conn.																							⚓			
Elmhurst, N. Y.																							⚓			
Fort Monmouth, N. J.																										⚓
Ithaca, N. Y.		⚓					⚓																			
Kings Point, N. Y.		⚓																								
Long Island, N. Y.															⚓											
New Haven, Conn.		⚓					⚓																			
New York City, N. Y.	⚓	⚓			⚓		⚓		⚓			⚓	⚓		⚓					⚓		⚓	⚓		⚓	⚓
Niagara Falls, N. Y.			⚓																			⚓				
Rochester, N. Y.		⚓					⚓										⚓									
Rockaway, N. J.																						⚓	⚓			
Schenectady, N. Y.		⚓																								⚓
Scotia, N. Y.					⚓		⚓																			
St. Albans, N. Y.												⚓														
Troy, N. Y.		⚓					⚓																			
New London, Conn.					⚓		⚓	⚓			⚓	⚓	⚓													⚓

*Naval Reserve Training Centers are also located in the following cities: CONNECTICUT: Cromwell, Hartford, Stamford, Waterbury. NEW JERSEY: Clifton, Elizabeth, Jersey City, Port Newark, Perth Amboy. NEW YORK: Dunkirk, Elmira, Freeport, Glens Falls, Huntington, Jamestown, Liverpool, Newburgh, New Rochelle, Oswego, Poughkeepsie, Tompkinsville, Utica, Watertown, Whitestone, Yonkers, Youngstown.

4th Naval District



	Recruiting Station	NROTC	NAS/Naval Air Activity	Receiving Station	Supply/Disbursing Activity	Naval Station	Naval Reserve Training Center*	Service Craft Activity	Construction Battalion Center	Recruit Training Center	School Command/NATTU	Naval Hospital/Med. Activity	Reserve Fleet	Amphibious Base	Communications/Radio Station	Fleet Training Center	Ordnance Depot/activity	Shipyard	Indust. Mgr. Off.	Intelligence Office	Navy Department Act.	Flag Off. Staff	BAR/BAMR	Retraining Command	Hydrographic Office	Other
Akron, Ohio			⚓				⚓																			
Atlantic City, N. J.			⚓				⚓																			
Camden, N. J.							⚓											⚓								
Cape May, N. J.															⚓											
Cleveland, Ohio					⚓		⚓																⚓			
Columbus, Ohio	⚓	⚓	⚓				⚓																⚓			
Johnsville, Pa.			⚓																							
Lakehurst, N. J.			⚓		⚓						⚓															
Mechanicsburg, Pa.					⚓												⚓									
Oxford, Pa.		⚓																								
Philadelphia, Pa.	⚓	⚓	⚓	⚓	⚓	⚓	⚓				⚓	⚓			⚓		⚓	⚓	⚓			⚓			⚓	
Pine Beach, N. J.		⚓																								
Pittsburgh, Pa.	⚓						⚓																			
Princeton, N. J.		⚓																								
Trenton, N. J.			⚓				⚓																			
University Park, Pa.		⚓																								
Villanova, Pa.		⚓																								
Willow Grove, Pa.			⚓																							
York, Pa.							⚓										⚓									

*Naval Reserve Training Centers are also located in the following cities: PENNSYLVANIA: Allentown, Altoona, Bethlehem, Eddystone, Erie, Harrisburg, Hazleton, Johnstown, Lancaster, McKeesport, Reading, Scranton, Kingston, Williamsport. OHIO: Canton, Cincinnati, Dayton, Hamilton, Lima, Lorain, Mansfield, Portsmouth, Steubenville, Toledo, Warren, Youngstown, Zanesville. DELAWARE: Wilmington.

seas service in the area requested or to continental U. S. shore duty.

SEA TOUR EXTENSIONS

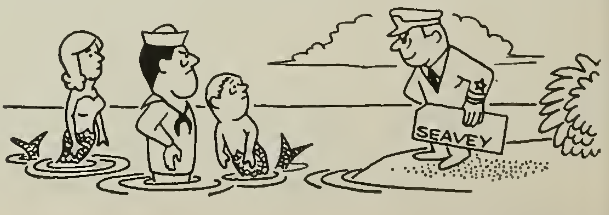
Extensions of sea tours will be considered by the Chief of Naval Personnel on the basis of urgent manning problems or personal hardships which might be created by the normal rotation of a particular individual.

The Seavey is intended to improve the situation for career enlisted personnel. If rotation to shore duty would create a personal hardship, you may submit a letter via your commanding officer to the Chief of Naval Personnel requesting that your current tour of sea duty be extended, stating the reason. If an extension is granted, the period of the extension will depend upon the circumstances.

If an individual's normal rotation to shore duty would materially affect the operations of a particular command, the commanding officer may request an extension of a sea tour for a particular individual from the Fleet commander. In order not to deprive any individual of his normal rotation, the circumstances must be such that no alternatives are available and it must be a matter of urgency. Final approval of such requests will be made by the Chief of Naval Personnel, depending upon the recommendations of the Fleet commander.

It is realized that certain individuals will appear on the Seavey who, because of their special or unique qualifications, will be difficult to replace through normal sea/shore rotation procedures. Owing to their particular criticalness and utilization, the Chief of Naval Personnel will extend the tours of such personnel until qualified replacements are available or the requirements of the particular unit or activity are reduced or eliminated.

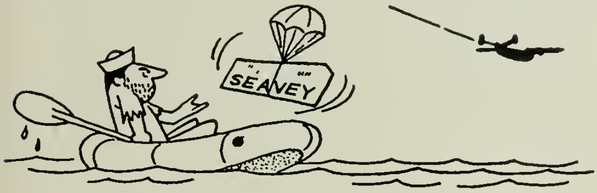
The fact that there will be instances where men are reluctant to leave *preferred sea duty* for shore assignments has been recognized. However, the Chief of



Naval Personnel has emphasized that preferred sea duty is just as desirable to—and is equally merited by—other men on sea duty. He has stated that equal opportunity for rotation to preferred sea billets is in the interest of consistency, fairness and efficiency to the same extent as rotation to shore duty.

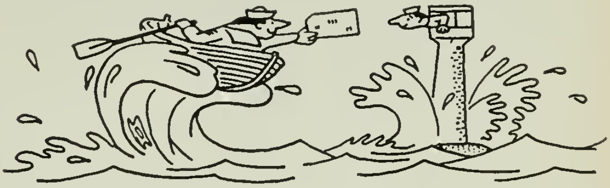
OBLIGATED SERVICE

Under normal conditions *12 months' obligated service will be required for general shore duty* in the continental U. S. and *24 months for overseas service.* Personnel can expect their orders for either type of duty from 6 to 12 months after receipt of their rotation data card. Therefore, those desiring rotation on time should insure that they have sufficient obligated service. If not, they should agree to extend their enlistment for the required period of time. An agreement to extend an enlistment can be effected for the explicit purpose desired by noting in the margin of the Agreement to Extend Enlistment page (1A) of the service record.



Personnel who do not receive orders to shore duty or overseas service before the expiration of their enlistment will cancel such an agreement to extend in accordance with Article C-1407 of *BuPers Manual.*

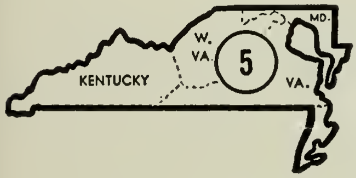
Certain special billets require more than 12 months obligated service. Personnel selected for these billets will be required to have obligated service as stipulated in the transfer directive. If a previous agreement to extend their enlistment has been executed for general assignment in overseas service or shore duty, that agreement shall be canceled when a new agreement is executed for the required obligated service.



To show, for example, a situation involving obligated service requirements, suppose your rating is in the Seavey segment that will fill in rotation data cards in July '57 for the Seavey effective 1 Oct 1957. This means you are assured of being ordered ashore sometime between 1 Oct 1957 and 1 Oct 1958. Your enlistment expires 15 Mar 1959. Since you are required to have at least one year obligated service *at the time of transfer to shore duty,* you would not have sufficient obligated service to be transferred ashore anytime between 16 Mar—1 Oct 1958.

To be assured of being reassigned ashore or to overseas service on schedule, you should, at the time of filling in your rotation data card, sign a provisional

5th Naval District



	Recruiting Station	NROTC	NAS/Naval Air Activity	Receiving Station	Supply/Disbursing Activity	Naval Station	Naval Reserve Training Center*	Service Craft Activity	Construction Battalion Center	Recruit Training Center	School Command/NATTU	Naval Hospital/Med. Act.	Reserve Fleet	Amphibious Base	Communications/Radio Station	Fleet Training Center	Ordnance Depot/activity	Shipyard	Indust. Mgr. Off.	Intelligence Office	Navy Department Act.	Flag Off. Staff	BAR/BAMR	Retraining Command	Hydrographic Office	Other
Ashland, Ky.	⚓																									
Bainbridge, Md.					⚓					⚓	⚓	⚓				⚓										
Baltimore, Md.	⚓						⚓											⚓	⚓	⚓					⚓	
Charlottesville, Va.		⚓																								
Chincoteague, Va.			⚓		⚓																					
Driver, Va.															⚓											
Elizabeth City, N. C.			⚓																							
Louisville, Ky.	⚓	⚓					⚓										⚓									
Newport News, Va.							⚓												⚓							
Norfolk, Va.			⚓	⚓	⚓	⚓	⚓				⚓	⚓		⚓	⚓	⚓	⚓	⚓		⚓		⚓		⚓	⚓	⚓
North West, Va.															⚓											
Portsmouth, Va.					⚓		⚓				⚓	⚓	⚓				⚓	⚓	⚓							
Richmond, Va.	⚓				⚓		⚓				⚓															
Virginia Beach, Va.			⚓								⚓					⚓										
Yorktown, Va.			⚓								⚓						⚓									

*Naval Reserve Training Centers are also located in the following cities: VIRGINIA: Augusta County, Lynchburg, Roanoke. WEST VIRGINIA: Huntington, Charleston, Wheeling. KENTUCKY: Covington, Lexington, Owensboro. MARYLAND: Cumberland.

agreement to extend your enlistment for one year or more.

This provisional agreement is placed in effect ONLY if you are ordered ashore or to overseas service within the time limits specified; that is, between 1 Oct 1957 and 1 Oct 1958. If, on 1 Oct 1958 for some reason you have not been ordered ashore, you may request the agreement to be canceled, and this will be done.

In the event you do not choose to execute a provisional agreement to extend your enlistment at the time of filling in your rotation data card (July 1957) you will be eligible for transfer only if your transfer is directed during the period 1 Oct 1957 and 15 Mar 1958. If your name comes up for reassignment during the period 16 Mar 1958 and 1 Oct 1958 your name will be struck from the active Seavey listing and no transfer directive will be issued until such time as you extend or reenlist. Such action will automatically place you back in the active Seavey.

SEAVEY DATA CARDS

When the rotation data cards are returned from each command, the PAMIs will combine the information on

6th Naval District

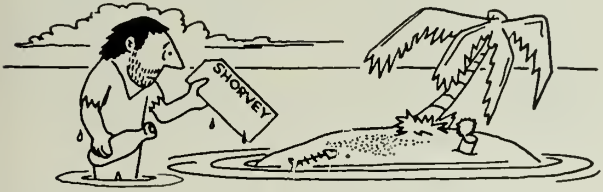
	Recruiting Station	NROTC	NAS/Naval Air Activity	Receiving Station	Supply/Disbursing Activity	Naval Station	Naval Reserve Training Center*	Service Craft Activity	Construction Battalion Center	Recruit Training Center	School Command/NATTU	Naval Hospital/Med. Act.	Reserve Fleet	Amphibious Base	Communications/Radio Sta.	Fleet Training Center	Ordnance Depot/activity	Shipyard	Indust. Mgr. Off.	Intelligence Office	Navy Department Act.	Flag Off. Staff	BAR/BAMR	Retraining Command	Hydrographic Office	Other
Athens, Ga.																										
Atlanta, Ga.		⚓	⚓				⚓																			
Auburn, Ala.		⚓																								
Beaufort, S. C.												⚓														
Birmingham, Ala.	⚓		⚓				⚓																			
Bristol, Tenn.			⚓																							
Brunswick, Ga.			⚓																							
Chapel Hill, N. C.		⚓																								
Charleston, S. C.				⚓	⚓	⚓	⚓				⚓	⚓			⚓	⚓	⚓	⚓	⚓	⚓		⚓				⚓
Charlotte, N. C.							⚓										⚓									
Clarksville, Tenn.																	⚓									
Columbia, S. C.	⚓	⚓			⚓		⚓																			
Durham, N. C.		⚓					⚓																			
Foley, Ala.			⚓																							
Green Cove Springs, Fla.													⚓													
Gulfport, Miss.							⚓		⚓																	
Jacksonville, Fla.	⚓		⚓		⚓		⚓				⚓	⚓							⚓							
Key West, Fla.			⚓		⚓	⚓					⚓	⚓			⚓		⚓									
Lejeune, N. C.											⚓	⚓														
Memphis, Tenn.			⚓		⚓		⚓					⚓														
Miami, Fla.			⚓				⚓													⚓						
Milton, Fla.			⚓																							
Nashville, Tenn.	⚓	⚓					⚓																			
Panama City, Fla.																	⚓									
Raleigh, N. C.	⚓						⚓																			
Sanford, Fla.			⚓																							
St. Petersburg, Fla.		⚓																								
University, Miss.		⚓																								
Pensacola, Fla.			⚓		⚓		⚓				⚓	⚓										⚓				

*Naval Reserve Training Centers are also located in: NORTH CAROLINA: Ashville, Wilmington, Winston Salem. GEORGIA: Augusta, Columbus, Macon, Savannah. TENNESSEE: Chattanooga, Jackson, Kingport, Knoxville. FLORIDA: Daytona Beach, Gainsville, Orlando, Riviera Beach, St. Petersburg, Tampa. ALABAMA: Gadsden, Huntsville, Mobile, Montgomery, Sheffield, Tuscaloosa. MISSISSIPPI: Greenville, Greenwood, Jackson, Laurel, Natchez, Vicksburg. SOUTH CAROLNIA: Georgetown, Greenville, Spartanburg.

them with that on the status cards they already have on hand for each individual. With the data from both cards, a "deck" of four Seavey data cards is prepared on each individual who has completed his prescribed tour of sea duty. This "deck" of cards is then transmitted by transceiver or air mail to the Chief of Naval Personnel.

These data cards will constitute the Seavey for each date from which personnel will be ordered to shore duty or overseas service during the next 12 months. The Fleet PAMIs will provide each Fleet commander with a complete listing of the names of their personnel on the Seavey.

They will also be provided listings of volunteers for overseas service in their Fleet. The latter listing will include the names of all personnel serving in the Fleets and in district units classified as sea duty, who have requested overseas service.



ASSIGNMENT OVERSEAS

From the special listings of those who request overseas service, the Fleet commanders will notify the Bureau of the personnel they desire for assignment to overseas service. Assignments are restricted to the overseas area of the individual's preference unless he indicates "anywhere overseas." If personnel are not requested for overseas assignment by the Fleet commander within nine months after the effective date of the Seavey segment, they will be ordered to shore duty in the continental U.S. by the Chief of Naval Personnel.

ASSIGNMENT TO SHORE DUTY

Personnel on the Seavey who have indicated a desire for shore duty, including instructor or recruiting duty, will be made available by the Bureau to Fleet commanders, commandants of the naval districts and river commands, and the Chief of Naval Air Training for a normal tour of shore duty. These commands will assign personnel to shore duty activities within the geographic limits of the naval district specified in the transfer directive.

Within the framework imposed by efficient manning,

8th Naval District

	Recruiting Station	NROTC	NAS/Naval Air Activity	Receiving Station	Supply/Disbursing Activity	Naval Station	Naval Reserve Training Center*	Service Craft Activity	Construction Battalion Center	Recruit Training Center	School Command/NATTU	Naval Hospital/Med. Act.	Reserve Fleet	Amphibious Base	Communications/Radio Station	Fleet Training Center	Ordnance Depot/activity	Shipyard	Indust. Mgr. Off.	Intelligence Office	Navy Department Act.	Flag Off. Staff	BAR/BAMR	Retiring Command	Hydrographic Office	Other
Albuquerque, N. M.	⚓	⚓	⚓			⚓	⚓										⚓									
Austin, Tex.		⚓					⚓																			
Beeville, Tex.			⚓																							
Corpus Christi, Tex.			⚓		⚓		⚓					⚓														
Dallas, Tex.	⚓		⚓				⚓																⚓			
Galveston, Tex.							⚓																		⚓	
Houma, La.			⚓																							
Houston, Tex.	⚓	⚓					⚓																			
Kingsville, Tex.			⚓																							
Little Rock, Ark.	⚓						⚓																			
McAlester, Okla.							⚓										⚓									
New Orleans, La.	⚓	⚓	⚓		⚓	⚓	⚓								⚓		⚓		⚓	⚓		⚓			⚓	
Norman, Okla.		⚓	⚓				⚓																			
Oklahoma City, Okla.	⚓						⚓																			
Orange, Tex.													⚓													
Port Arthur, Tex.							⚓																			⚓
Shumaker, Ark.							⚓										⚓									

*Naval Reserve Training Centers are also located in the following cities: LOUISIANA: Alexandria, Lake Charles, Lafayette, Shreveport. OKLAHOMA: Stillwater, Tulsa. ARKANSAS: Fort Smith. TEXAS: Amarillo, Beaumont, El Paso, Fort Worth, Lubbock, San Angelo, San Antonio, Waco, Wichita Falls.

every effort will be made to assign you as close as possible to the specific locality of your choice.

Highest priority for duty assignment to the location of your choice will be given to those with the most naval service and a history of arduous duty. In addition, the duty you have had during the past 10 years and humanitarian circumstances will be factors considered in determining duty assignments.

Special consideration will be given to the assignment of personnel with 17 or more years of naval service. Every effort will be made to place such personnel in the locality of their choice.

TRANSFERS TO OPPOSITE FLEET

The normal method of opposite Fleet transfer will be by rotation from sea to shore duty and then back to sea duty again. Every effort will be made to assign personnel to the Fleet of their choice upon completion of a normal tour of shore duty.

In those rates where the tour of sea duty exceeds four years, the Seavey procedure enables personnel to request transfer to the opposite Fleet. In order to submit such a request, you must not be on the Seavey and must have completed 48 months of continuous sea service in one Fleet.

ULTIMATE ASSIGNMENTS

After the Bureau makes you available to a Fleet commander, district or river command, commandant or CNATRA, the distribution officer for those activities will determine your ultimate duty assignment. In so doing, a copy of the assignment card will be forwarded to your commanding officer who will transfer you during the "available month" indicated on the 1A data card.

When transferred to shore duty, you are dropped from the Seavey. You will be ordered to sea again upon completing a normal tour of shore duty (see lengths of shore duty tours on page 31) by means of the Shorvey.

Questions and Answers on Your Assignment to Sea and Shore Duty Under Career Rotation Program

Intense interest in the new Career Rotation Program has resulted in a large number of inquiries being made to ALL HANDS concerning various aspects of the program. Here are a few of the questions that have been asked, with the answers.

QUES: *Do I have to be rotated ashore under the Seavey, or can I turn down the transfer and remain at sea?*

ANS: Under ordinary circumstances you will be required to carry out the transfer directive. However, you may request an extension of your sea tour by submitting a letter to the Chief of Naval Personnel, via chain of command, if rotation to shore duty on time would create a personal hardship. If an extension is granted, the period of extension will depend on the circumstances. All such requests should fully describe and document the hardship being created.

QUES: *When will the Seavey affect my rating?*

ANS: All rates are being placed in one of three "segments" (or sections, according to rating groups) of the Seavey. For the date when your rating will first be placed under the Seavey, see the chart on page 35 of this issue.

QUES: *Under this new rotation program do I get to indicate my preferences for next duty assignment?*

ANS: Absolutely! On the Rotation Data Card which will be mailed to your ship or station for completion, you list your preferences for next duty. A wide variety of duty choices are available from which to elect your preferences, and every effort will be made to assign you to the duty you prefer. Your chances of getting the exact duty you prefer should be considerably better under the new program.

QUES: *How many shore duty preferences must I indicate on the Navy's Seavey Rotation Data Card?*

ANS: You are not *required* to indicate *any* choices. However, if you leave the card blank it will be assumed by the Bureau that you are not concerned with the area in which you are to be assigned, and you may be assigned to any area of the U.S. where a man of your rating is needed. It is to your advantage to list at least three different choices, (preferably cities in different naval districts) in order to help the distribution officer to place you in an area you desire. It helps even more to indicate the code for "Anywhere East of the Mississippi" or the code for "Anywhere West of the Mississippi."

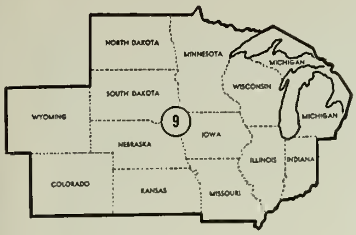
QUES: *Will I be assigned only to the duty preferences I indicate on my Rotation Data Card?*

ANS: Every effort will be made to assign you to one of the naval districts you indicate as a choice. However, the distribution officer is not restricted to confining your assignment to those areas when no billets are available. In such cases you may be made available for assignment to other areas.

QUES: *Under the Seavey, will the length of time I have served on my present ship or station have an effect on when I'm ordered to shore duty?*

ANS: No. When you have completed the prescribed sea tour for your rating you will be reported on the Seavey. Your CO may request deferment of your date of transfer for a period of not more than six months because of an operating schedule, but the length of time you have spent aboard a particular activity is not a factor for determining time of transfer. The new Career Rotation Program is designed to increase the stability of men in the Fleet. It's for your benefit.

9th Naval District



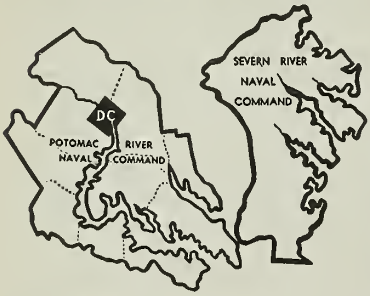
	Recruiting Station	NROTC	NAS/Naval Air Activity	Receiving Station	Supply/Disbursing Activity	Naval Station	Naval Reserve Training Center*	Service Craft Activity	Construction Battalion Center	Recruit Training Center	School Command/NATTU	Naval Hospital/Med. Act.	Reserve Fleet	Amphibious Base	Communications/Radio Station	Fleet Training Center	Ordnance Depot/activity	Shipyard	Indust. Mgr. Off.	Intelligence Office	Navy Department Act.	Flag Off. Staff	BAR/BAMR	Retraining Command	Hydrographic Office	Other
Ames, Iowa		⚓																								
Ann Arbor, Mich.		⚓																								
Boulder, Colo.		⚓																								
Chicago, Great Lakes, Ill.	⚓	⚓	⚓		⚓	⚓	⚓			⚓	⚓	⚓							⚓	⚓		⚓				⚓
Evanston, Ill.		⚓					⚓																			
Cheyenne, Wyo.							⚓																			
Columbia, Mo.		⚓																								
Colorado Springs, Colo.							⚓																			
Crane, Ind.					⚓												⚓									
Denver, Colo.	⚓		⚓				⚓																			
Des Moines, Iowa	⚓						⚓																			
Detroit, Mich.	⚓		⚓				⚓																⚓			
Fargo, N. D.	⚓						⚓																			
Forest Park, Ill.							⚓										⚓									
Glenview, Ill.			⚓								⚓															
Grosse Ile, Mich.			⚓																							
Hastings, Nebr.																	⚓									
Hutchinson, Kan.			⚓				⚓																			
Indianapolis, Ind.	⚓		⚓				⚓										⚓						⚓			
Kansas City, Mo.	⚓		⚓				⚓																⚓			
Lawrence, Kan.		⚓																								
Lincoln, Nebr.		⚓	⚓				⚓																			
Madison, Wis.		⚓					⚓																			
Milwaukee, Wis.		⚓					⚓																			
Minneapolis, Minn.	⚓		⚓				⚓										⚓									
Mishawaka, Ind.																	⚓									
South Bend, Ind.		⚓					⚓																			
Olathe, Kan.			⚓																							
Omaha, Nebr.	⚓					⚓	⚓																			
St. Louis, Mo.	⚓		⚓				⚓					⚓					⚓						⚓			
Urbana, Ill.		⚓																								
West Lafayette, Ind.		⚓																								
Wichita, Kans.							⚓																			

*Naval Reserve Training Centers are also located in the following cities: INDIANA: Anderson, Evansville, Fort Wayne, Gary, Michigan City, Muncie, Terre Haute. ILLINOIS: Aurora, Danville, Decatur, Joliet, Rockdale, Moline, E. Peoria, Quincy, Rockford, Springfield. MICHIGAN: Battle Creek, Bay City, Benton Harbor, Cadillac, Dearborn, Flint, Grand Rapids, Hancock, Jackson, Kalamazoo, Lansing, Muskegon, Pontiac, Port Huron, Saginaw. IOWA: Burlington, Cedar Rapids, Davenport, Dubuque, Sioux City, Waterloo. MISSOURI: Cape Girardeau, Hannibal, Joplin, St. Joseph, Springfield. WISCONSIN: Green Bay, Kenosha, Lacrosse, Oshkosh, Racine, Sheboygan. COLORADO: Pueblo. KANSAS: Topeka, Witchita. S. DAKOTA: Sioux Falls.

11th Naval District

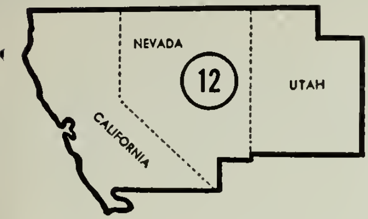
	Recruiting Station	NROTC	NAS/Naval Air Activity	Receiving Station	Supply/Disbursing Activity	Naval Station	Naval Reserve Training Center*	Service Craft Activity	Construction Battalion Center	Recruit Training Center	School Command/NATTU	Naval Hospital/Med. Act.	Reserve Fleet	Amphibious Base	Communications/Radio Station	Fleet Training Center	Ordnance Depot/activity	Shipyard	Indust. Mgr. Off.	Intelligence Office	Navy Department Act.	Flag Off. Staff	BAR/BAMR	Retraining Command	Hydrographic Office	Other
Camp Pendleton, Calif.											⚓	⚓														
China Lake, Calif.			⚓		⚓							⚓					⚓									
Chula Vista, Calif.			⚓																							
Corona, Calif.												⚓														
El Centro, Calif.			⚓																							
Fallbrook, Calif.																	⚓									
Imperial Beach, Calif.											⚓				⚓											
Las Vegas, Nev.							⚓																			
Los Angeles, Calif.	⚓	⚓	⚓		⚓		⚓													⚓			⚓			
Phoenix, Ariz.			⚓				⚓																⚓			
Point Mugu, Calif.			⚓																							
Pomona, Calif.											⚓						⚓									
Port Huenene, Calif.			⚓		⚓				⚓		⚓															
San Diego, Calif.			⚓	⚓	⚓		⚓			⚓	⚓	⚓	⚓	⚓	⚓	⚓			⚓			⚓	⚓	⚓		⚓
San Pedro, Calif.					⚓		⚓																			
Santa Ana, Calif.			⚓				⚓																			
Seal Beach, Calif.			⚓														⚓									
Wilmington, Calif.																									⚓	
Long Beach, Calif.			⚓	⚓	⚓	⚓	⚓						⚓					⚓	⚓	⚓						
Hawthorne, Nev.							⚓										⚓									

*Naval Reserve Training Centers are also located in the following cities: CALIFORNIA: Bakersfield, Compton, N. Hollywood, Huntington Park, Pasadena, San Bernardino, Santa Barbara, Santa Monica. ARIZONA: Tucson.



	Recruiting Station	NROTC	NAS/Naval Air Activity	Receiving Station	Supply/Disbursing Activity	Naval Station	Naval Reserve Training Center	Service Craft Activity	Construction Battalion Center	Recruit Training Center	School Command/NATTU	Naval Hospital/Med. Act.	Reserve Fleet	Amphibious Base	Communications/Radio Station	Fleet Training Center	Ordnance Depot/activity	Shipyard	Indust. Mgr. Off.	Intelligence Office	Flag Off. Staff	Navy Department Act.	BAR/BAMR	Retraining Command	Hydrographic Office	Other
Annapolis, Md.			⚓			⚓						⚓			⚓											
Arlington, Va.															⚓											
Bethesda, Md.											⚓	⚓														
Cheltenham, Md.															⚓											
Dalgren, Md.			⚓														⚓									
Indian Head, Md.											⚓						⚓									
Patuxent River, Md.			⚓		⚓																					
Quantico Va.																										
Silver Springs, Md.							⚓										⚓									
Suitland, Md.																									⚓	
Washington, D. C.	⚓		⚓	⚓	⚓		⚓	⚓			⚓	⚓			⚓		⚓	⚓					⚓			⚓

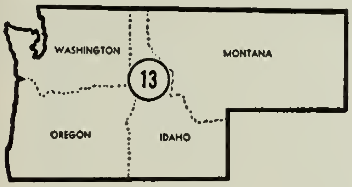
12th Naval District



	Recruiting Station	NROTC	NAS/Naval Air Activity	Receiving Station	Supply/Disbursing Activity	Naval Station	Naval Reserve Training Center*	Service Craft Activity	Construction Battalion Center	Recruit Training Center	School Command/NATTU	Naval Hospital/Med. Act.	Reserve Fleet	Amphibious Base	Communications/Radio Station	Fleet Training Center	Ordnance Depot/Activity	Shipyard	Indust. Mgr. Off.	Navy Department Act.	Flag Off. Staff	BAR/BAMR	Retraining Command	Hydrographic Office	Intelligence Office	Other
Alameda, Calif.			⚓		⚓		⚓																			
Berkeley, Calif.		⚓										⚓														
Dixon, Calif.															⚓											
Fallon, Nev.			⚓																							
Moffett Field, Calif.			⚓		⚓																					
Monterey, Calif.			⚓				⚓				⚓															
Oakland, Calif.			⚓		⚓						⚓	⚓					⚓	⚓								
Ogden, Utah					⚓		⚓																			
Salt Lake City, Utah	⚓	⚓					⚓																			
San Francisco, Calif.	⚓			⚓	⚓	⚓	⚓		⚓		⚓	⚓			⚓			⚓	⚓		⚓			⚓		
Sonoma, Calif.															⚓											
Stockton, Calif.					⚓		⚓																			
Stanford, Calif.		⚓																								
Tiburon, Calif.											⚓															
Vallejo, Calif.		⚓			⚓	⚓	⚓					⚓			⚓	⚓		⚓	⚓							

*Naval Reserve Training Centers are also located in the following cities: CALIFORNIA: Fresno, Sacramento, San Jose, San Mateo, Santa Cruz. NEVADA: Reno.

13th Naval District



	Recruiting Station	NROTC	NAS/Naval Air Activity	Receiving Station	Supply/Disbursing Activity	Naval Station	Naval Reserve Training Center*	Service Craft Activity	Construction Battalion Center	Recruit Training Center	School Command/NATTU	Naval Hospital/Med. Act.	Reserve Fleet	Amphibious Base	Communications/Radio Station	Fleet Training Center	Ordnance Depot/activity	Shipyard	Indust. Mgr. Off.	Intelligence Office	Navy Department Act.	Flag Off. Staff	BAR/BAMR	Retraining Command	Hydrographic Office	Other
Astoria, Ore.					⚓														⚓							
Bremerton, Wash.						⚓	⚓					⚓					⚓	⚓	⚓	⚓						⚓
Butte, Mont.	⚓						⚓																			
Corvallis, Ore.		⚓																								
Idaho Falls, Idaho		⚓																								
Keyport, Wash.																	⚓									
Marietta, Wash.															⚓											
Moscow, Idaho		⚓																								
Oak Harbor, Wash.			⚓		⚓																					
Oso, Wash.															⚓											
Pocatello, Idaho																	⚓									
Portland, Ore.	⚓						⚓								⚓											
Seattle, Wash.	⚓	⚓	⚓	⚓	⚓		⚓								⚓				⚓			⚓			⚓	
Spokane, Wash.			⚓				⚓																			
Tacoma, Wash.							⚓																			

*Naval Reserve Training Centers are also located in the following cities: WASHINGTON: Aberdeen, Bellingham, Everett, Longview. MONTANA: Billings. IDAHO: Boise. OREGON: Eugene, Salem.

Here's How Billets Are Distributed Ashor

		Total Sea Billets		Total Overseas Billets		Total Continental U. S. Shore Billets (Including District Shore Duty, Fleet Shore Duty, Instructor Duty and Recruiting Duty) and BuPers Controlled Billets.											
	RATE	LANT	PAC	LANT	PAC	1ND	3ND	4ND	5ND	6ND	8ND	9ND	11ND	12ND	13ND	PRNC	SRNC
Boatswain's Mate	BMC	816	854	106	235	83	61	42	213	129	38	67	196	95	42	70	11
	BM1	946	961	104	221	48	41	27	121	121	26	53	104	82	45	74	24
	BM2	1408	1595	94	208	49	40	26	102	151	66	29	150	79	58	58	12
	BM3	1929	2174	131	286	61	30	17	80	174	22	2	150	48	61	70	16
Quartermaster	QMC	312	318	35	63	40	32	28	78	56	31	106	98	58	12	44	4
	QM1	629	528	39	71	26	39	30	81	59	55	94	55	71	12	29	3
	QM2	706	627	35	65	32	18	19	87	104	59	43	76	40	23	17	3
	QM3	639	605	36	81	14	1	3	15	25	2		30	10	13	15	
Radarman	RDC	127	103	12	4	6	1	1	57	14	2	35	59	18	1	3	
	RD1	596	530	16	7	18	3	7	93	63	21	64	79	33	5	9	2
	RD2	994	854	9	12	37	3	9	109	74	36	26	100	33	8	10	5
	RD3	1658	1476	14	9	14	1	3	41	27	5	6	30	4	2	6	
Sonarman	SOC	129	90	10	7	1	5	1	9	33	2	18	54	3		1	
	SO1	467	296	17	14	9	5	6	40	80	9	11	59	10	1	2	1
	SO2	506	305	11	6	9	5	7	20	69	3	5	38	4	3	3	2
	SO3	833	522	18	3	3	1	2	11	8			9	1	2		
Torpedoman's Mate	TMC	324	208	10	22	49	37	7	19	35	8	22	35	15	12	5	
	TM1	453	275	12	34	39	45	8	15	32	7	17	39	9	17	11	
	TM2	590	367	7	48	23	38	5	24	34	12	15	38	11	18	1	
	TM3	621	388	9	57	22	25		14	18	2	2	16	2	17		
Gunner's Mate	GMC	472	399	24	55	25	28	20	77	44	21	143	105	19	16	30	2
	GM1	799	763	21	69	28	23	32	71	82	63	99	63	35	21	25	1
	GM2	1089	1003	23	70	37	15	26	84	104	39	23	111	27	40	25	2
	GM3	1763	1588	28	111	21	13	10	26	147	24		60	17	40	15	1
Fire Control Technician	FTC	320	237	16	13	8	10	6	66	20	8	60	52	9	3	40	1
	FT1	541	422	7	9	23	25	18	65	29	21	72	63	16	15	46	5
	FT2	692	641	2	1	12	8	20	41	61	33	8	59	27	18	6	5
	FT3	972	684	2	2	7	7	9	3	31	17		38	12	16		4
Guided Missileman	GSC	17	8		9				18	1	7	2	9				
	GS1	31	18		13				16	2	7	3	25			1	
	GS2	39	18		17				11	3	8	3	30				
	GS3	50	22		24				7	4	15		26				
Mineman	MNC	19	8	6	21	5	2	1	13	7		2	2	3	4	4	
	MN1	25	14	15	35	10	3	1	20	8		1	4	4	5	4	
	MN2	30	16	19	46	10	3	1	26	13			2	5	11	5	
	MN3	39	20	18	82	10	6	1	25	17			5	2	12	7	
Electronics Technician	ETC	287	191	44	74	12	19	6	35	44	19	95	57	87	14	22	4
	ET1	696	508	72	138	24	36	18	69	79	28	106	88	123	34	43	5
	ET2	1028	858	87	147	25	25	22	60	87	38	22	102	99	41	48	7
	ET3	1065	948	116	176	21	16	18	53	95	26	14	102	53	40	40	5
Instrumentman	IMC	18	11		2		1		2	1		7		2		1	
	IM1	24	25	3	5	3	2		4	3		8	2	1		1	
	IM2	35	31	6	5		1		5	3	1	1	3	1		1	
	IM3	45	27	2	4	1	1		1	1						2	
Opticalman	OMC	25	14		3	2	4					12	4		1		
	OM1	29	22	2	3	1	5			1		9	1		2	1	
	OM2	45	27	1	2		6		1			8	1	1			
	OM3	54	39	1	3	1	4										
Teleman	TEC	43	46	43	52	2	6	3	16	11	7	4	18	12	5	29	
	TE1	112	145	96	112	6	7	9	37	21	17	6	38	31	9	39	
	TE2	189	213	125	194	11	16	14	44	30	17	11	35	45	14	67	
	TE3	468	454	218	347	14	12	19	87	40	30	12	57	56	12	84	
Radioman	RMC	490	391	75	142	23	19	14	130	75	21	20	113	31	9	62	1
	RM1	915	751	126	255	47	24	20	182	96	26	17	122	60	29	80	3
	RM2	1208	1019	167	404	52	20	19	168	119	34	16	118	76	33	92	2
	RM3	1659	1451	262	642	46	25	17	198	117	24	17	126	69	35	93	
Communications Technician	CTC			171	439	16	4		1	7			28	28	5	171	
	CT1			243	592	23	7			14		2	37	44	8	245	
	CT2	1		306	746	334	8		1	17			51	59	11	316	
	CT3			423	897		11			23		1	35	73	12	378	

nd Afloat by Rate, Fleet and ND Location

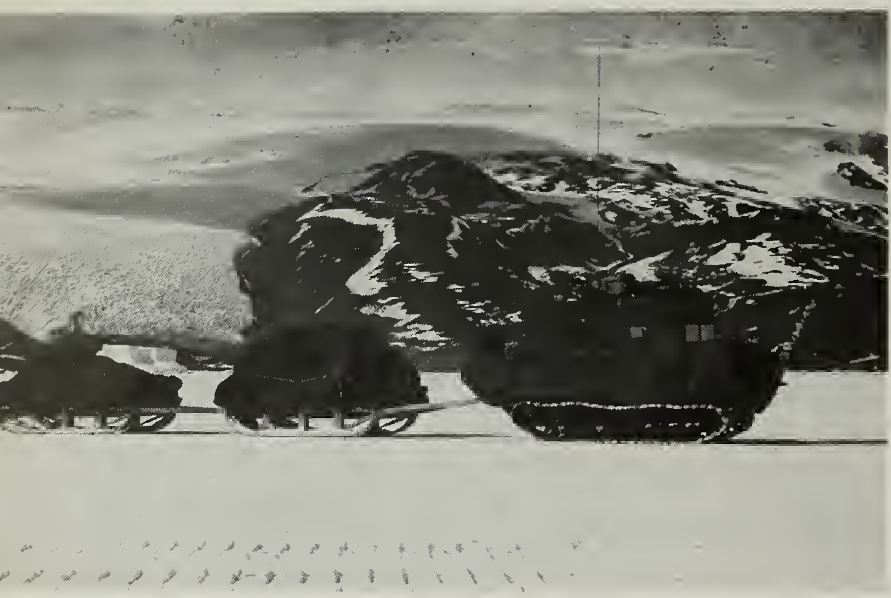
		Total Sea Billets		Total Overseas Billets		Total Continental U. S. Shore Billets (Including District Shore Duty, Fleet Shore Duty, Instructor Duty and Recruiting Duty) and BuPers Controlled Billets.													
	RATE	LANT	PAC	LANT	PAC	1ND	3ND	4ND	5ND	6ND	8ND	9ND	11ND	12ND	13ND	PRNC	SRNC
Yeoman	YNC	504	379	157	163	40	58	41	151	90	55	80	114	71	21	196	2
	YN1	791	661	228	285	64	101	44	226	162	71	100	200	105	38	255	3
	YN2	878	721	262	371	91	98	56	250	214	78	123	261	114	42	252	2
	YN3	980	886	192	517	128	118	50	375	297	98	129	299	161	52	248	6
Personnel Man	PNC	93	76	16	46	19	33	15	108	30	26	53	105	33	13	30	1
	PN1	333	271	38	88	25	27	26	132	57	36	75	130	50	19	48	3
	PN2	270	242	48	119	37	36	22	144	88	46	96	147	52	18	50	4
	PN3	333	423	48	119	43	28	23	158	108	47	94	192	58	22	34	7
Storekeeper	SKC	250	238	84	127	39	26	26	69	62	21	37	62	34	16	19	2
	SK1	608	579	103	200	49	38	37	124	113	34	37	110	65	32	38	4
	SK2	734	785	127	263	60	53	40	142	131	46	44	137	83	45	45	3
	SK3	1009	1028	166	316	57	65	51	140	169	47	36	176	72	53	58	6
Disbursing Clerk	DKC	49	34	18	22	10	10	13	26	21	10	11	21	14	5	7	1
	DK1	122	75	32	55	16	9	8	39	32	12	7	37	20	5	8	2
	DK2	366	330	28	47	10	13	10	36	28	9	7	40	12	5	13	2
	DK3	114	113	30	64	20	27	8	48	43	16	6	62	15	6	12	2
Commissaryman	CSC	366	325	45	79	38	14	12	72	80	23	22	72	47	12	17	7
	CS1	890	821	80	144	58	25	21	166	111	44	87	159	61	24	46	8
	CS2	1107	985	128	240	96	32	27	251	182	66	134	267	102	46	70	8
	CS3	1233	1161	148	247	91	27	39	299	216	77	166	297	106	45	53	9
Ship's Serviceman	SHC	52	51	13	23	7	5	3	25	11	7	8	19	7	4	5	1
	SH1	369	351	27	46	14	16	14	48	37	12	41	36	16	5	12	4
	SH2	657	566	45	73	12	8	9	56	60	18	11	65	32	17	13	5
	SH3	931	898	41	84	18	10	10	77	81	20	15	95	40	12	23	10
Journalist	JOC	17	9	5	9	2	3	2	15	2	3	11	8	2	1	9	
	JO1	22	25	6	19	4	2	1	12	11	4	12	13	6	2	5	1
	JO2	28	21	7	24	2	2	1	12	8	3	8	9	3	3	3	2
	JO3	26	3	10	36	4	4		17	11	6	10	7	2	2	8	1
Lithographer & Printer	LIC	19	12	6	4	2		4	3			1		4		6	
	LI1	48	35	11	4	6		7	6		1		4	3		7	
	LI2	21	6	14	10		1	6	10			1	2	4		9	
	LI3	67	57	10	13			9	15				2	5		14	
Draftsman	DMC	8	2	4	2		1		5	2	1	1	10		1	2	
	DM1	32	22	15	16	2	5		17	7	5	3	17	4		14	
	DM2	33	27	17	15	2	3	1	27	16	4	9	16	5		15	
	DM3	30	35	17	16		2	2	16	20	7	10	15	3		19	
Musician	MUC	17	14	4	7	3	2	1	50	5	1	3	7		1	42	36
	MU1	47	38	10	19	6	5	3	63	13	4	8	16		4	11	24
	MU2	101	80	23	42	12	6	6	52	25	8	16	23		8	2	19
	MU3	117	92	25	48	14	10	7	36	29	10	19	31		10		6
Machinist's Mate	MMC	1034	945	20	34	48	49	39	211	101	58	185	193	94	28	26	3
	MM1	1585	1459	10	36	37	47	32	186	146	66	164	179	90	31	11	2
	MM2	2137	1969	10	31	40	31	38	128	202	83	48	211	89	40	25	1
	MM3	2780	2683	17	22	21	25	20	31	88	16	1	82	36	44	16	
Engineman	ENC	619	504	40	64	25	79	38	76	75	32	60	63	53	34	20	7
	EN1	1306	1098	72	161	55	92	33	132	138	48	64	139	74	59	28	22
	EN2	1277	1169	87	166	55	62	22	111	100	29	16	147	77	68	28	9
	EN3	1677	1647	87	124	41	40	6	72	95	19	1	98	30	58	29	16
Machinery Repairman	MRC	86	66	3	8	3	5	3	5	11	3	5	34	7	3	5	
	MR1	208	178	8	22	11	11	2	24	25	8	8	37	12	3	2	1
	MR2	472	365	13	22	12	10	4	31	42	14	25	25	21	10	9	
	MR3	336	259	6	18	3	11	1	4	15	1	2	14	9	5	1	
Boilerman	BTC	436	403	16	17	14	30	31	85	45	25	107	97	38	11	6	1
	BT1	834	718	7	15	16	26	48	128	70	82	127	89	58	17	18	1
	BT2	1688	1591	8	14	56	15	30	126	141	46	43	132	62	27	25	
	BT3	2260	2035	10	9	29	9	18	22	33	15	7	45	14	26	14	
Electrician's Mate	EMC	725	631	24	31	24	51	30	89	89	37	78	145	49	32	19	3
	EM1	1101	962	27	60	35	65	45	99	113	31	64	137	58	52	16	7
	EM2	1642	1453	52	130	47	63	34	101	151	37	16	155	66	74	24	9
	EM3	2158	2044	31	96	14	25	23	54	95	20	1	111	45	65	16	3

(Continued on next page)

		Total Sea Billets		Total Overseas Billets		Total Continental U. S. Shore Billets (Including District Shore Duty, Fleet Shore Duty, Instructor Duty and Recruiting Duty) and BuPers Controlled Billets.											
	RATE	LANT	PAC	LANT	PAC	1ND	3ND	4ND	5ND	6ND	8ND	9ND	11ND	12ND	13ND	PRNC	SRNC
I. C. Electrician	ICC	102	91	2	7	1	7	4	7	9	2	27	34	9	5	7	
	IC1	501	428	5	14	11	23	12	48	48	16	35	54	21	13	8	1
	IC2	435	413	7	5	6	12	12	25	40	11	12	35	17	18	10	1
	IC3	641	581	5	8	14	11	11	11	22	7	1	26	10	14	1	
Metalsmith	MEC	198	170	6	13	4	24	8	17	22	9	6	55	13	9	6	1
	ME1	577	534	13	28	33	39	15	54	64	10	12	74	20	20	7	1
	ME2	526	451	10	28	9	36	15	21	58	6	10	53	15	21	1	
	ME3	682	673	12	31	5	42	9	19	46	5	1	54	14	29	2	
Pipe Fitter	FPC	197	94	5	6	6	8	5	18	14	2	5	23	8	8	4	
	FP1	264	309	7	18	11	9	9	17	22	14	12	44	14	15	5	2
	FP2	575	531	6	20	2	13	12	32	39	12	16	51	20	25	9	3
	FP3	582	560	9	19	11	11	11	11	28	3	1	47	16	26		1
Damage Controlman	DCC	135	130	30	40	12	11	16	24	31	5	10	38	60	6	8	4
	DC1	317	321	25	64	13	17	16	30	51	11	7	39	42	15	6	8
	DC2	541	524	37	63	19	21	6	42	70	16	16	47	39	22	12	10
	DC3	384	384	26	67	4	16	4	41	58	8	4	48	66	20	14	8
Patternmaker	PMC	6	8		1				1			1	5				
	PM1	17	17	1					3			4	5	2		1	
	PM2	16	9		1				1				3	1			
	PM3	22	15			1					3						
Molder	MLC	16	13									8	4	3			
	ML1	17	17	1	1				3	3		4	4				
	ML2	19	15	1	1	1							3	3			
	ML3	37	21			1							2				
Surveyor	SVC	10	5	2	3	2			2			2	5	1			
	SV1	12	7	4	4	2			3	2	1	1	5				
	SV2	14	9	3	3	1			3	1	2		2	1			
	SV3	17	11	7	10	1				4	1	1	7				
Construction Electrician's Mate	CEC	30	21	12	25	4			9	6	1	9	10	2		4	
	CE1	43	40	14	40	2			12	4	3	6	15	1			
	CE2	62	64	25	58	2	1		13	8	3		20	1	1		
	CE3	64	78	36	78	2			10	9	4		27	2			
Driver	CDC	36	45	13	23	3	1	1	15	10	8	3	30	5	1	2	
	CD1	73	95	22	54	7	3	1	18	20	12	2	38	4	1	2	
	CD2	96	148	37	90	4		1	13	40	16	7	60	5		3	
	CD3	116	196	60	110	7		2	11	56	21	11	69	8	2	11	
Mechanic	CMC	27	25	13	23	4			10	3	2	7	21	2		1	
	CM1	56	49	26	34	5			11	8	5	1	32	2		1	1
	CM2	60	73	31	44	3			9	7	10	3	44	3			1
	CM3	82	95	40	59	5			10	7	11		50	3			1
Builder	BUC	63	65	12	33	4	7	8	29	11	8	18	27	3	1	2	
	BU1	135	124	16	56	5	3	6	29	13	5	16	28	9	2	3	
	BU2	149	188	21	76	4			37	12	9	13	42	9		1	
	BU3	182	242	32	101	5			14	7	7	5	55	2	1	3	
Steel Worker	SWC	21	23	3	11	2	5		9	3		5	14	1			
	SW1	39	48	4	20	4			3	3	1	6	19	1	1		
	SW2	47	63	7	26	2			4	7	3	2	15	2			
	SW3	62	84	9	28	1			4	2	3		25				
Utilities Man	UTC	24	22	13	30	2			13	4		2	14	7	2	4	
	UT1	38	36	19	35	6			5	8	3	4	12	1		2	
	UT2	41	53	26	42	2	2	2	6	8	3	4	10	1		1	
	UT3	59	73	43	57	1			5	9	4	5	19	1		1	
Construction Man	CN/CP	582	666	266	488	23			13	78	63	35	182	22	5	20	
Aviation Machinist's Mate	ADC	945	823	94	257	36	23	33	105	435	183	77	144	106	15	117	3
	AD1	1157	1032	116	361	64	23	45	145	629	301	143	230	152	17	180	6
	AD2	1517	1378	137	461	89	32	76	173	655	404	191	306	194	22	226	10
	AD3	2120	1962	191	568	53	52	100	192	893	534	238	441	242	24	311	13
Aviation Electronics Technician	AT/ALC	568	490	36	106	18	11	13	76	234	60	26	135	36	6	44	1
	AT/AL1	854	730	75	159	30	15	35	122	316	101	50	163	51	11	53	2
Aviation Electronicsman	AT/AL2	1205	1016	75	233	40	18	41	148	356	124	51	210	71	21	74	4
	AT/AL3	1680	1485	93	362	48	44	45	170	327	154	69	305	118	25	89	5
Aviation Ordnanceman	AOC	223	189	17	43	8	1	11	25	112	28	2	47	13	2	19	
	AO1	342	293	17	55	10		11	38	110	44	5	76	20	3	25	
	AO2	496	470	33	69	16		11	35	101	51	8	97	24	4	23	
	AO3	719	709	37	103	28		14	46	119	82	4	134	40	8	26	

		Billets Total Sea		Total Overseas Billets		Total Continental U. S. Shore Billets (Including District Shore Duty, Fleet Shore Duty, Instructor Duty and Recruiting Duty) and BuPers Controlled Billets.											
	RATE	LANT	PAC	LANT	PAC	1ND	3ND	4ND	5ND	6ND	8ND	9ND	11ND	12ND	13ND	PRNC	SRNC
Aviation Fire Control Tech.	AQC	86	77	1					8	34	3	2	17	1	1	3	
	AQ1	146	124	1				3	14	42	1	4	18	1	1	2	
	AQ2	194	145	3					17	29	2	8	31	2		2	
	AQ3	254	218	2		1	1		5	3	1		25		1	2	
Aviation Guided Missileman	GFC	12	6						11	19		1	19				
	GF1	21	15						23	20			21				
	GF2	24	16						29	14			29				
	GF3	32	27						40	2			42				
Air Controlman	ACC	26	53	22	38	12	4	11	30	46	28	38	29	15	8	9	
	AC1	93	55	33	63	21	6	21	40	93	48	70	50	29	13	16	1
	AC2	102	85	41	71	21	5	30	53	105	52	30	60	34	13	21	1
	AC3	289	258	55	88	26	5	38	51	123	58	29	78	41	12	29	2
Aviation Boatswain's Mate	ABC	82	95	11	15	3	2	43	13	29	19	5	15	14	1	14	1
	AB1	161	171	21	30	7	1	41	23	54	31	6	23	22	4	31	
	AB2	220	275	32	33	7	3	45	22	67	32	5	23	29	5	31	1
	AB3	304	356	37	41	7	3	54	28	68	41	13	41	30	3	36	1
Aviation Electrician's Mate	AEC	260	215	14	51	6	3	6	27	145	46	13	38	25	1	16	1
	AE1	466	415	28	84	14	8	11	43	188	79	20	59	41	4	30	1
	AE2	582	505	43	130	19	12	15	62	177	94	34	96	70	3	52	1
	AE3	806	736	54	170	24	26	17	67	230	128	47	107	90	4	58	1
Aviation Structural Mechanic	AMC	399	337	31	75	12	5	15	41	240	104	23	65	42	4	29	2
	AM1	611	537	47	127	21	14	29	59	346	204	45	103	72	5	50	4
	AM2	871	756	61	186	30	14	37	88	381	223	76	156	104	6	66	5
	AM3	1255	1122	96	254	39	30	47	117	477	316	96	237	144	7	92	7
Parachute Rigger	PRC	24	22	9	10	5	1	19	9	23	12	3	19	7	2	5	1
	PR1	131	223	13	25	3	2	26	14	35	26	9	33	7		11	
	PR2	127	102	11	19	2	4	5	14	47	36	11	42	10		13	1
	PR3	133	128	18	34	10	4	13	21	73	49	14	57	16	4	19	2
Aerographer's Mate	AGC	30	30	27	42	3	1	25	12	24	8	4	13	11	5	18	1
	AG1	97	87	37	63	5	2	20	19	32	16	5	20	16	9	28	1
	AG2	102	71	57	91	8	4	13	32	51	16	4	30	24	12	36	2
	AG3	114	92	67	113	9	4	15	52	71	22	4	39	32	15	46	3
Aviation Storekeeper	AKC	94	73	21	40	11	1	10	31	46	15	4	38	20	3	16	1
	AK1	178	176	42	69	20	2	19	46	75	28	5	59	32	4	21	1
	AK2	151	135	47	88	24	5	23	56	88	41	6	74	47	7	27	2
	AK3	230	208	74	121	26	4	35	76	127	57	12	100	60	7	30	2
Photographer's Mate	PHC	57	49	8	26	4	2	6	16	26	8	4	18	4	1	42	2
	PH1	154	131	15	48	6	5	12	29	60	13	4	38	14	3	88	1
	PH2	178	150	29	84	8	4	8	28	54	15	5	49	12	2	115	1
	PH3	163	143	23	95	5	4	10	29	56	16	6	60	14		155	2
Airman	AN/AA	10303	10207	1010	2257	617	205	428	1390	4502	2255	671	2267	1440	115	1239	75
Hospital Corpsman	HMC	588	588	62	143	91	150	93	247	165	79	177	215	143	46	245	12
	HM1	588	723	89	204	94	148	114	256	280	85	158	285	156	40	253	15
	HM2	492	688	85	238	134	112	103	310	295	75	115	358	190	58	207	22
	HM3	603	943	91	284	151	128	104	336	350	81	131	477	200	58	215	31
Hospitalman	HN/HA	435	831	105	359	264	195	204	630	555	122	225	887	289	88	298	45
Dental Technician	DTC	37	32	5	16	8	8	6	34	17	7	15	44	12	3	26	2
	DT1	81	84	20	44	17	9	9	48	46	14	18	76	27	6	31	3
	DT2	94	94	12	40	15	12	13	55	54	14	22	88	28	11	36	5
	DT3	93	106	16	32	25	13	15	68	63	19	22	100	31	9	47	7
Dentalman	DN/DA	66	52	10	28	30	18	11	107	86	22	44	164	29	6	60	9
Steward	SDC	135	152	22	37	10	12	9	32	47	16	8	30	16	8	58	8
	SD1	517	464	23	58	19	11	16	41	78	24	18	52	24	13	38	11
	SD2	674	598	31	66	21	10	17	60	103	39	23	51	27	12	29	6
	SD3	560	649	44	81	24	8	15	56	143	48	31	65	31	14	27	5
Stewardsman	TN/TA	2704	2557	109	223	101	46	51	196	548	151	104	184	97	36	69	345
Signalman	SMC	234	204	4	1	1	1		5	1			2	1			
	SM1	281	313	2	1	1	1		9	1			1	3			
	SM2	397	426	4	1	2	2		9	1			4	4			
	SM3	457	531	9	1	2	1		17	1			4	3			
Boilermaker	BRC	32	36		3								3		1		
	BR1	242	254								1		4	7	2		
	BR2																
	BR3																

★ ★ ★ ★ TODAY'S NAVY ★ ★ ★ ★



NEAR THE SOUTH POLE Navymen are doing their bit by furnishing logistic support like this during research for International Geophysical Year.

Navigating in Hurricanes

Scientists attending the recent International Conference on Radio and Sonic Aids in Marine Navigation, held in Hamburg, Germany, have been given a close look at navigation problems encountered in and around hurricanes. The scientific paper, providing the conference with a wealth of knowledge unattainable elsewhere, was presented by LT Alfred N. Fowler, USN, aerological officer of Airborne Early Warning Squadron Four, the Navy's hurricane hunter squadron based at Jacksonville, Fla.

Lieutenant Fowler has spent six seasons with the hurricane hunters as a navigator, pilot and flight aerologist. In addition to highlights of operations during past seasons, LT Fowler used data gathered during five different flights into the 1956 hurricane "Betsy" to illustrate his presentation before scientists from all over the world.

Included in the paper, to be published by the conference committee, was a section on the use of Airborne Early Warning Radar in storm detection and on the importance of the Loran navigation system for long overwater flights.

End for 'Big E'

The famed carrier *Enterprise* (CVS 6, formerly CV 6)—winner of 20 World War II battle stars in the Pacific—is to be sold for scrap. The battle-scarred flattop has been declared "unfit for further naval service."

The 20,000-ton carrier sailed more than 275,000 miles during WW II, taking part in every naval action in Far East waters except the battle of the Coral Sea. (For details, see February 1956 All Hands Book Supplement). During this period, claims for shooting down 737 enemy planes, sinking 101 ships and damaging 177 others were recorded.

Suffering structural damage from 16 hits and near misses, *Enterprise* was reported sunk six times by the Japanese government.

Known as the "Big E" to veterans of the fighting in the Pacific, the venerable WW II flattop was mothballed near Bayonne, N. J.

Because it would cost too much to modify the 20,000-ton ship, now outmoded by 60,000-ton carriers of the *Forrestal* class, *Enterprise* has been ordered sold for scrap metal at the highest bid over one million dollars.

Her name has been ordered stricken from the U.S. Naval Vessel Register to make a place for a future *Enterprise.*

YESTERDAY'S NAVY

On 5 Jan 1778 powder kegs prepared by David Bushnell were launched against British fleet on the Delaware River. Confederate blockade by *Vestra* and *Ranger* was destroyed off Wilmington, N. C., 11 Jan 1864. On 26 Jan 1913 the body of John Paul Jones was placed in a crypt at the Naval Academy Chapel. *Decatur* shelled town of Seattle to protect settlers from Indians, 26 Jan 1856. For the first time Stars and Stripes flew over a foreign stronghold, Fort Nassau, Bahamas, 27 Jan 1778. Submarine *Seawolf* (SS-197) delivered ammunition to Corregidor, and evacuated Naval and Army pilots on 27 Jan 1942. Naval Station, Akutan Harbor, Fox Island, Alaska, was established, 30 Jan 1943.

Barbecues and Luaus Yet

In an all-out effort to make Navy food more appetizing and appealing, new techniques and methods of cooking and serving meals are appearing throughout the Navy almost daily.

The most recent and perhaps the most inviting comes from deep in the heart of Texas, where an outdoor barbecue pit is operated in conjunction with the general mess at NAAS Chase Field.

The first meal served in the picnic-like atmosphere featured charcoal-broiled steaks. Its acceptance by the crew was immediate and enthusiastic. Since then, barbecued ham, chicken beefburgers and pork chops have been served. "Shiskebab," which is practically unheard of in other Navy mess halls, is the most recent entree offered by the Chase Field Commissarymen.

Not to be outdone by the Texas

barbecue is the Naval Air Station at Miramar, Calif. While native islanders and tourists were celebrating the much publicized Aloha Week festivities in Hawaii, the Miramar Navymen were doing some Hawaiian-style celebrating themselves. The Air Station featured "Hawaiian Day in the Mess Hall" which was highlighted by a real "luau" (Hawaiian feast). More than 50 assorted items were served from the "Waikiki Salad and Sandwich Bar" that was set up in the mess hall. The entree featured barbecued chicken, baked ham, shrimp cocktail, avocados and other tropical fruits, and even Hawaiian punch.

Hawaiian music was played during the noon meal and the only feature lacking to make the luau complete was grass-skirted, hula girls.

The satisfied expressions of well-fed sailors was ample repayment for the additional efforts required by the Chase Field and Miramar commissarymen in turning out the barbecued meals and Hawaiian feast.

Chichi Jima Club is Chi-Chi

Want the recipe for turning a museum into a showplace—or would "sideshow" be a better word for an EM club? Anyhow, you can ask the sailors, Seebees and Marines on Chichi Jima; they've found a formula which goes something like this: Take a small mess hall which doubles as a part-time club and crowd it to the point where the patrons become dissatisfied; next find an available unused building. Then talk your disgruntled "customers" into donating part of their "resting time" to a communal working party, and add the services of any spare hands who stray across the horizon. Finally, stir things up for approximately two and a half months. The result: a handsome two-story club and recreation building — and a prime excuse for a "wetting down" party to break in something like the Ginkokai Club.

Putting the recipe to work on Chichi Jima, a dot land in the Bonin Islands south of Japan, was a simple matter since all ingredients were at hand. A steadily increasing number of single enlisted men (along with the family Navymen and their wives) overcrowded the existing chow-cum-club facility. Handy—and vacant—was a two-story concrete structure once occupied by the Bonin Islands Museum. Manpower with the necessary talent was also handy.

The old museum building was in deplorable condition, scarred on the outside by WW II bullets and shrapnel, scummed on the inside by plaster fallen from the walls and a two-inch growth of moss where water had leaked through the roof. The working force was prime, however, and under the leadership of Staff Sergeant Hector C. Beebe, USMC; HM1 Edward C. Ring, USN; and RM1 Joe F. Towell, USN, all hands (including Seabees who were on the island TAD) turned to renovating and modernizing the one-time museum.

A jungle of *ginkokai* trees (used by the Japanese for camouflage purposes) was cleared away; plaster was replaced, window casing and windows were reinstalled; the electrical circuit was rewired. A final coat of paint and the installation of furnishings completed the new recreation facility.

Practically everyone stationed on Chichi Jima and several of the island's leading citizens turned up for the gala opening, which included the usual drawing for prizes plus "home-cooked" chow prepared by brownbaggers' wives.

Ginkokai Clubbers boast that their club exists because they were convinced that "Where there's a will, theres' a way, even 'way out here."

FTCs With Punch and Crunch

"A trophy for every try" might well be adopted as a slogan by the precision drill team from Fire Control Technician School, NTC San Diego—a marching outfit which has picked up a trophy in each of 18 competitions in little more than a year of existence.

The precision drillers achieved their record despite the fact that team membership is constantly changing since the men are all Fire Control School Students who return to Fleet duty after completing their training. Each new "recruit" needs about four weeks of practice to fit him into the group—and he remains a member of the team only about 19 weeks. Then, too, each man who joins the team must buy his own special gear and practice on his own time, while maintaining a scholastic average of 80 per cent.

"Dress uniform" for the team consists of blues with white accessories or whites with black accessories, including helmet liners, belts, special leggings and aiguillettes. A highly-polished .30-06 rifle with bayonet and white sling completes the outfit for each man in the team's marching unit.

Organizer and still drillmaster of the specialized groundpounders is Wendell H. Woodward, FT3, USN.

OLD MUSEUM became fine new EM club as enlisted men on Chichi Jima put spare time and talents to work.

Woodward, a WW II Navyman who volunteered for duty with the Marine Corps on Okinawa, returned to active Navy duty in June 1954. He reported to the Fire Control Tech school as a student in May 1955, after deciding to change his rate from boatswain's mate.

Woodward, his 16-man marching unit and five-man color guard, made their debut in a local California competition—and marched off with first place honors. Since then the team has picked up 17 additional trophies, performed at more than 50 public gatherings and participated in two national and six regional telecasts.

Pioneer Pilots Return

More than 50 pathfinders from the early pages of naval aviation history returned briefly to "active duty" recently in USS *Forrestal* (CVA 59) to see how their pioneer efforts are paying off in the atomic age.

Among the old-timers who inspected the ship with a keen interest in everything they encountered, were such colorful figures as VADM P. N. L. Bellinger, USN (Ret.), RADM Albert C. Read, USN (Ret.) and RADM David S. Ingalls, USNR. Admiral Bellinger, whose plane was shot up over Vera Cruz, Mexico, in 1914, was the first naval aviator ever to undergo that unpleasant experience. Admiral Read piloted the *NC-4* on its historic Atlantic crossing in 1919 and Admiral Ingalls was the Navy's first ace.

For two days the group looked around, batted the breeze with *Forrestal's* crew and relived the days when they and aviation were young together. As enthusiastic and inquisitive as ensigns on their first fire drill, the visitors received a big welcome from the crew of *Forrestal.*

NAVAL AVIATOR NO. 93 (H. Landon) compares his uniform with that of LTJG F. Jonas during *Forrestal* reunion.

Dropping down to the chiefs' mess for coffee, two of the guests, Admiral Bellinger and Guy McLaughlin (both members of the first class of enlisted pilots back in 1916) regaled the CPOs with anecdotes and sea stories from the days before most of their listeners were born.

On the bridge, while discussing flights made 40 years ago, the "early birds" watched CDR Duke Windsor put the record-setting F8U *Crusader* through its paces. Later, while talking of long-departed planes with top speeds of only 100 miles per hour, they interrupted their conversation to hear CDR Windsor explain why he had kept the *Crusader* under 1000.

Finally, after countless climbs up and down ladders and miles of inspection trips, the visitors left the ship at Mayport, Fla., for the trip home—made by air, of course.

Record for Crusader

Navy's first entry in the famed Thompson Trophy event of the National Aircraft Show was an FAU-1 *Crusader*—and she set a new national speed record of 1015.428 miles an hour, pushing the Thompson mark beyond the 1000-mile figure for the first time (the previous record, set last year, was 822 mph).

The *Crusader*, a standard production model equipped with a full armament complement of 20mm cannon, made the flight over a 15.1 kilometer course on the desert at China Lake, Calif. Piloted by CDR R. W. "Duke" Windsor, USN, the faster-than-sound carrier-based fighter made two passes over the course, being clocked at 1018.553 mph on the northern run and 1012.303 on the return course.

CDR Windsor piloted the plane 400 miles in making the two runs, although the course itself was approximately 19 miles long. The rest of the distance was used in climbing to 40,000 feet altitude and making supersonic turns at both ends of the runs. The *Crusader* was off the ground for a total of 32 minutes.

New Helmet for Jet Pilots

Navy pilots are now being supplied a new integrated protective helmet developed by the Bureau of Aeronautics.

The new helmet provides additional protection needed in flying high speed jet aircraft.

Incorporated into the helmet shell is a rigid plastic foam material which yields at a given force, and in crushing, dissipates the force and protects the head. To adopt a helmet using such a material to human

TIME FLIES—*Forrestal* visit gives early aviators a chance to compare carrier operations of yesterday and today.

head-size ranges, a sizing system of soft foam neoprene liners, with two thicknesses each for back, crown, and frontal pads, is utilized.

A retractable eyeshield assembly accommodates either a clear or neutral gray filter lens material, and provides eye protection. The earcup assembly increases communication by reducing noise.

A compact communications harness makes use of a new jack which contains both the transformer and leads for the microphone and headset receives. The chin strap and oxygen mask mounting tube have been designed to retain the helmet and oxygen mask during emergency escapes at high speeds.

Back in Jones' Home Town

USS *John Paul Jones* (DD 932) has returned to Boston, Mass., upon completion of an extensive shakedown cruise which took her to Portsmouth, England; Edinburgh, Scotland; Oslo, Norway; Copenhagen, Denmark, and Le Havre, France.

While visiting Edinburgh, crew members made a side trip to Kirkcudbright, the birthplace, in July 1747, of the man for whom their ship was named.

While in Kirkcudbright, they visited the church where John Paul Jones' family worshiped. It contains a baptismal font which was presented by the U.S. Navy in memory of the naval hero. In the churchyard, the crew visited the grave of his father, John Paul, Sr.

The Jones' crew then visited a little cottage on the Arbigland Estate, a few miles from Kirkbean. It was in this small cottage, overlooking the sea, that John Paul Jones was born.

The U.S. Navymen were dinner guests at the John Paul Jones Hotel and were officially welcomed to Kirkcudbright. Upon arriving at the town hall, they were greeted by the local residents who took them to their homes to spend the night.

In appreciation for the hospitality offered them, the *John Paul Jones* men presented to the public of Kirkcudbright a silver tray "in memory of Commodore John Paul Jones" and a bronze copy of the ship's seal.

The Shield-shaped emblem has an image of Jones in the center, circled by the names of all the ships which he commanded. Across the top are inscribed his immortal words: "I have not yet begun to fight."

USS JOHN PAUL JONES (DD 932)—Her shakedown cruise to European ports gave crew a chance to see birthplace of hero whose name she bears.

The Word on 'Fabulous Fifteen'

The legend of "Fabulous Fifteen," —Carrier Air Group 15, that is— continues to grow right merrily, although the group recently completed another WestPac tour and is now undergoing training in California. *Fifteen,* which was with ADM Marc A. Mitscher's Task Force 58 during its World War II Pacific heyday, was first commissioned in April 1943— and within five months was headed into history with USS *Hornet* (CV 12).

From *Hornet* to *Essex* (CV 9), to *Tulgai* (CVE 72) and *White Plains* (CVE 66), from their initial combat sortie against Marcus Island to the day their group was decommissioned in October 1945, the men of CVG 15 worked at giving their outfit a reputation as one of the hardest-fighting units in the Pacific. The proof of their success: that nickname "Fabulous Fifteen" and a Presidential Unit Citation.

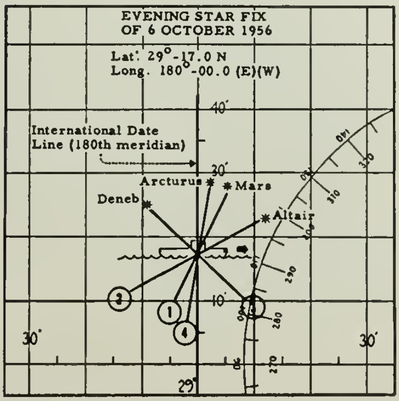
Recommissioned in March 1946, CVG 15 made a tour of the Orient and a short tour in Alaskan waters before again being decommissioned in December 1949.

In April 1951 other men and

A Sea Story is a Sea Story — But Here's Proof

The right man doing the right thing at the right time and in the right place has brought USS *Wasp* (CVA 18) the minor glory of a once-in-a-lifetime navigational experience—a round of star fixes which plotted the CVA smackdab on the International Date Line, the 180th meridian.

Considered a "lucky accident" by most navigators, the unusual star fix was taken by M. A. Embry, QMC, USN at 1810 one evening while CVA 18 was steaming from Japan to Pearl Harbor. Many ships have crossed and recrossed the international Date Line and celestial observations have been made through dead reckoning, yet a star fix placing a ship exactly on the 180th meridian remains extremely rare for a number of reasons.



For one thing, star sights can be taken only twice a day, early in the morning just before sunrise, and late in the afternoon just after sunset. Only at these times are both the horizon and the stars distinctly visible at the same time. Thus a ship has to be crossing the Date Line during such a time for it to be able to "mark" the time of crossing precisely on the 180th meridian.

Then, in addition to being in the right place at the right time, you must have the right man doing the right thing—in other words *Wasp's* Chief Embry just happened to pick the right time to take his routine evening star sights.

'FABULOUS FIFTEEN' F2H-3 *Banshee* leaves arresting gear to taxi forward for parking on deck of *USS Wasp* (CVA 18) as CAG 15 returns from Far East.

other planes were joined to recommission CVG 15. During their first Korean tour, these men embellished their squadron's legend by chalking up nearly 6000 sorties against enemy positions. Ten million pounds of bombs were dropped, accounting for over 3000 rail cuts, destruction or damage to 46 locomotives, 500 trucks, 900 rail cars and some 100 bridges. Also added to the "Fabulous Fifteen" record: one Korean Presidential Unit Citation.

CVG 15 in January 1952 headed for a second tour in the Korean theater. The group, this time made up of reserve squadrons on active duty, presaged the success of that second Korean tour by achieving (during their Operational Readiness Inspection) the highest proficiency mark awarded up to that time in the Korean conflict.

Back in "the land of morning calm" the group promptly dug into their self-imposed task of legend-building. In 55 consecutive days "on the line" CVG 15 pilots flew over 3000 sorties—and set a new one-day record by flying 184 sorties in support of ground forces engaged in the Battle of Anchor Hill. During the same period one of the Group's pilots, LT Guy P. Bordelon, USN, became the only Navy ace of the Korean action.

From that point forward, the story of "Fabulous Fifteen" simmers down to the more ordinary West Coast-WestPac shuffle: They returned to the States in September 1953 for rest and a training cycle, deployed to the Orient again in March 1954 and returned to Moffett Field in March 1955. Following another of the eternal training cycles, they headed into the Far East again, but this time their agenda included an Armed Forces Day display for the citizens of Guam, a flying salute at the commissioning of the new Cubi Point Naval Air Station on Luzon, Philippines,—and "eyeballing" goodwill visits to such assorted ports of call as Manila, Hong Kong, Yokosuka, Sasebo, Iwakuni and Kobe.

Nowadays, seeing that the group is deep in yet another training cycle, any major additions to the "Fabulous Fifteen" legend are being made in various "snug harbors" within liberty radius of Moffett Field. Despite the location, however, CVG 15's men stand ready to assure any doubters that there's plenty of fire behind the aviation unit's "smoke."

Armed Scow Makes 3250-Mile Inland Water Journey Without Incident

It takes a heap of moving to deliver a shipboard gun installation to a new home—particularly when the gun mount is at the Naval Gun Factory in Washington, D.C., its "home" is U. S. Naval Training Center, Great Lakes, Ill., and it is not feasible to disassemble the mount because of its complexity and the expense of reassembly.

But there was a solution which saved the Navy about two-thirds of the cost involved in the disassembly-reassembly method of overland shipment: The 57-ton 3"70 caliber mount, measuring 23 feet in height and 18 feet in diameter, was moved intact through a roundabout 3250-mile inland water course to Great Lakes. A steel scow, built from the hull of an old LST and resembling a barge, offered the strength and stability needed for the job.

Loaded aboard the scow by a heavy-duty overhead crane at the Gun Factory, the covered mount was towed down the Potomac River and Chesapeake Bay on the first leg of a 40-day journey. Entering the Intercoastal Waterway at Norfolk, the mount traveled through inland waters to Key West, Fla., rounded the Keys to Carrabelle, Fla., then moved on to New Orleans.

From there the mount made slow progress up the Mississippi River to Lockport, Ill., and the entrance to Chicago's Sanitary Canal, where the mount could not pass under the low railroad bridges which crossed the canal. As a result, 18 drawbridges were opened to permit passage.

When the scow finally arrived at the Great Lakes Boat Basin, the most difficult part of the moving job still lay ahead. The mount had to be uncovered, off-loaded from the scow, and moved overland to the Gunner's Mate School nearly a mile away.

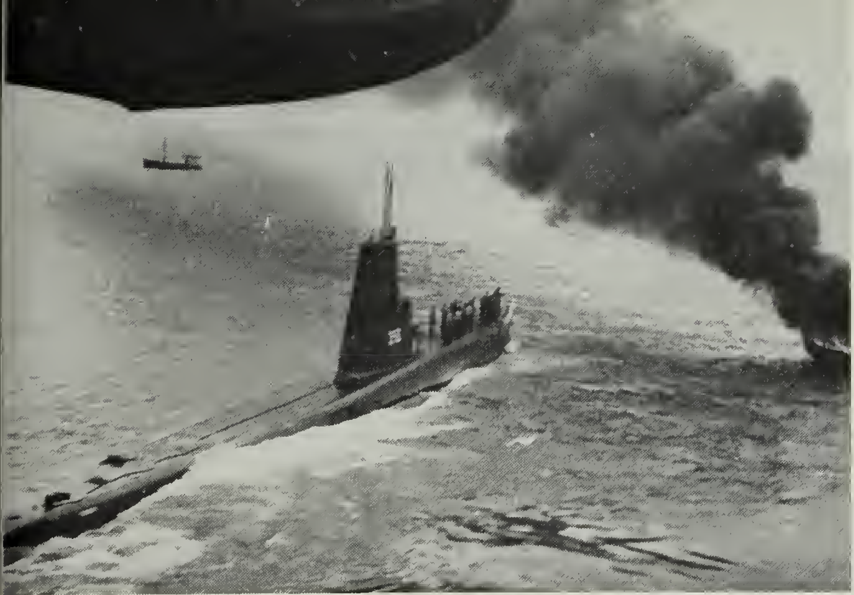
In moving the mount from the scow to dockside, the entire 57-ton unit was raised by powerful pneumatic jacks so that two 65-foot I beams could be slipped under the mount's lower frame girders.

Heavy skid dollies were then used to transfer the mount to 50-ton moving dollies equipped with airplane-type wheels.

Before the actual moving could get underway, transportation personnel had to choose the most accessible route to the school and determine the exact degree of all grades, curves and banks. Streets also had to be checked to see if they could withstand the combined weight of the gun mount and associated moving equipment, including three heavy trucks.

Although no problems were encountered, other than a hill with an 11 per cent grade and a four-degree bank on one curve, it took two days to move the mount to the GM school.

At its new home in Great Lakes, the 3"70 caliber mount will be the basis for an 18-week course of advanced training for men holding rates of GM2 and above. Primarily designed for use as part of the dual-purpose batteries on frigates and larger destroyers, the mount is one of the Navy's newest weapons. This type of weapon is at present in limited service.



HELPING HANDS—Navy ships, *USS Dogfish* (SS 350) and *Willis A. Lee* (DL 4) come to the aid of a burning fishing trawler in water off Long Island, N. Y.

TV for 'Bing Ding'

Many ships in the Navy can claim a closed television circuit for intraship use. But no ship can claim anything to compare with the Armed Forces Television Station "Bing Ding" which transmits seven days a week.

USS *Badoeng Strait* (CVE 116) claims to have the world's first and smallest entertainment television station afloat.

Station Bing Ding televises many types of programs, nationally known favorites as well as "live" shows on world news, sports, local talent and disc jockeys.

AFTS "Bing Ding" goes on the air at 1645 daily, Monday through Friday, at 1500 on Saturdays and at 1400 Sunday afternoons. Televiewers of this station are not subject to "TV-blues" the next morning because they watched the late, late, late show. The station shuts down nightly at 2145.

Some of the "canned" programs may look very familiar to the avid TV fan watching "Bing Ding." Since these nationally telecast programs have been filmed over the past two years, chances are that viewers might have seen the live show a while back in the States. Each kinescope is complete, as shown Stateside, including commercials.

The kinescopes come from the Armed Forces Television Service in New York City in lots of 50 hours, enough to last the station a week.

AFTS Bing Ding is manned by a staff of five—two officers and three enlisted men—who serve in the multiple and interchangeable capacities of announcers, commentators, producers, directors, engineers, previewers, technicians, sweepers, dishwashers, and any other jobs that happen along. All five men received an intensive two weeks of training at a commercial television school.

Atomic Warfare Defense School

Navymen battle against an atomic blast every week at the Atomic, Biological and Chemical Warfare Defense School at the Norfolk Naval Base where they are students.

An intensive five-day course trains the men for assignment to Fleet decontaminating and monitoring crews.

LEARNING TO COUNT — Student in Norfolk's 'ABCD' Course looks for hot spots during simulated atomic attack.

The average enrollment is 24 men in each class.

The training course includes General Quarters assignments, damage control, seeking and finding dangerous sources of atomic rays and the decontamination of men. A simulated atomic blast is part of each week's course.

A three-deck mock superstructure of a destroyer escort is used as a prop during the course. The plywood training ship is complete with hatches, ladders, intercommunication system, ports, bridges, and other features of an actual fighting ship down to the regulation coat of Navy gray paint. It adds realism—as well as interest—to the classroom lectures.

As a precautionary and training measure men are issued foul weather gear and goggled masks to protect them from simulated atomic radiation and radioactive dust.

All students take part in a "battle problem" which marks the end of the course. During this time the ship undergoes an atomic "attack" and all hands put their practical knowledge to use.

Heavy lead containers of radium and cobalt 60 are concealed in special hiding places for the teams to detect.

When the crew finds a hot spot by the help of Geiger counters, locations are reported to damage control headquarters over the intercom system. After the ship is cleared of dangerous radioactivity, all hands are then personally decontaminated.

THE BULLETIN BOARD

Here's New Summary on Living Conditions in the Philippines

If you are ever fortunate enough to rate a tour in the Philippines, you will feel that you've been more than repaid for some of the less desirable duty stations. Those who have been there claim that, whether you're just starting out on your Navy career or are finishing 30, you won't regret an assignment here. That's what they say.

The Navy maintains two bases in the Philippines, both on Luzon. They are Subic Bay and Sangley Point, and both are fairly close to Manila. Although transportation to Manila from both places is available, it is either substandard or else entails a long waiting period between trips. As a result, private autos are not only highly desirable, but are practically necessities.

Climate — The climate of the Manila area is tropical. Daytime temperatures average from 86 to 94 degrees throughout the year. The lowest minimum temperatures occur from December to March, with 70 degrees being the average minimum. The "hot season" comes in April, May and June, when the daily peak is 90 to 95 degrees. The rainy season is from June through October. As much as 13 inches of rain have fallen in one day during that season.

Housing — The housing at both Subic Bay and Sangley Point is mostly of a temporary type, but is adequate and comfortable. There are a few regular houses for senior officers at both stations, but most of the quarters are converted quonsets. The usual facility consists of two or three bedrooms, bath, living room, dining room, kitchen and screened porch. Showers are provided, but bathtubs are not available at present. Kitchen stoves and refrigerators are provided.

There are a few suitable civilian houses, outside the station at Sangley Point, which can be rented. There is no civilian housing at Subic Bay. There is a waiting list for Navy housing. Full quarters allowance is withheld when government quarters are occupied. Quarters located here are equipped with basic furniture.

"You go right back there and reenlist!"

Household effects — Take along your own glassware and kitchen appliances, and other electric appliances where government quarters are not expected to be readily available. This will be the situation in most cases since the average wait for government housing is 12 months.

If you decide to bring your own mattresses and pillows (and you should), it is worth remembering that foam rubber is better suited to the climate than cotton, hair, feathers, or innersprings. All essential items for setting up housekeeping can be purchased on the stations, but most items require a three-month waiting period for delivery. Civilian shops in Manila are well stocked, but prices are extremely high.

The electrical current on the stations is suitable for stateside equipment. Take whatever electrical appliances you like. The current in the Philippines is standard Stateside 110-volts, 60-cycle, A.C. A washing machine is a must. The non-automatic, ringer-type is best, for if your automatic machine breaks down you may have a long wait for parts and in most places the water pressure is not sufficient for proper operation. Refrigerators are furnished with government quarters.

Do not take gas appliances; there is no fuel for them in the islands.

You will want a radio, of course, and television sets are useful in the Philippines now. Don't bother with a vacuum cleaner unless you have some pet use for the attachments, since there is no upholstered furniture in the islands, and very few draperies. The rugs are all straw or fiber, and a broom will do fine.

Automobiles—Roads in the Manila area are in fairly good condition. Private automobiles should be taken; they are not essential, but are extremely desirable. Gasoline is not rationed and costs about 19 cents a gallon through the Quartermaster stations.

Make sure your tires are good and that your battery is fairly new. Mechanical and body repairs can be obtained easily and economically but batteries are expensive.

Clothing—*Women:* Women should take mostly summer clothing, preferably cottons. A few bright summer evening dresses should be included. Local seamstresses are plentiful and highly skilled. Rain gear is essential for the wet season. Navy Exchanges carry some personal items. Prices for women's apparel in local markets are very high.

Men: The cotton uniform is worn for duty, and, for certain evening affairs, you will need whites or their equivalent. These are available at the service sales outlets. Civilian clothes are authorized for off-duty wear.

Children: For the children a generous supply of regular summer play clothes is needed. So are play shoes. They will need school clothes, of course, but they should be washable.

Shoes for the whole family are a problem in the islands, best solved by a Stateside personal shopper or a mail-order catalog. Mail orders enter the Philippines through the APO or FPO, and thus do not require payment of the import charges of the local government.

Servants—Servants are available at very reasonable rates. Wages range from a minimum of $15 a month (plus room and board) for a housegirl to a maximum of $50 a month for a man and wife.

Your wife may wish to do most of her own housework and cooking, and hire a part-time housegirl to take care of the washing and ironing. These girls are usually paid about $10 per month for working three days per week.

Food — Commissaries and Navy Exchanges carry most food to which Americans are accustomed. Local markets are stocked with many kinds of tropical fruit, as well as familiar varieties of vegetables. Stores in Manila also offer a wide variety of foods, but prices are high.

Medical care — Dispensaries are available at both stations, and furnish medical care and limited dental care to dependents. All possible dental work should be done before leaving for the Philippines. Persons wearing glasses should take along an extra pair owing to the difficulty of filling prescriptions there.

Education — American schools, through high school, are available to all personnel. Educational opportunities are comparable to those offered by the public schools in the States. Training at college level is obtainable at numerous colleges in the Manila area. The school year begins in June and ends early in March. Government buses carry students back and forth to school.

Religion—Protestant and Catholic services are held at the station chapels. In addition, services in almost all denominations can be found in the Manila area.

Banking — Facilities for banking comparable to those found in any large city are available in Manila.

You may not spend American money in the islands. On the bases you will deal in Military Payment Certificates, and elsewhere, you must use the currency of the land. You may not, by the way, take more than $50 in U.S. money into the Philippines, and this you must exchange for MPCs or pesos within 24 hours.

Recreation—Camp John Hay is a recreation center for the Far East, and the U.S. military on Luzon can expect to get there frequently during their tours. It is a mountain resort that offers golf, swimming, fishing, and other outdoor activities, and there are cottages there so that families may live the quiet life of a mountain resort in the States.

There are a number of golf courses on or near the military reservations, and also fishing, boating, swimming, picnicking, and the social activities of a military community. There are officers', petty officers' and service clubs on all the bases, and American personnel lead a close-knit life that leads to considerable family-type social entertaining.

A popular scenic spot for week-end excursions is Tagaytay Ridge, overlooking a lovely lake.

Families with young children should take along a good supply of toys and other items for amusement. These are expensive and scarce locally.

Pets—Certificates of good health should be obtained in the country of departure for all pets. Dogs must have anti-rabies shots. Pets are examined upon arrival and are not required to remain in quarantine if the above requirements are met.

General—Dependents planning to travel to the Philippines should check early on immunization requirements and make sure they comply fully. Smallpox, typhoid, tetanus, cholera and typhus are required. Application must be made for passports and visas.

WHAT'S IN A NAME

Named For A Queen

The naval barracks at Annapolis, Md., is not a shore-based installation but a ship.

This ship is referred to as a naval barracks because it performs all the functions of one. It houses, feeds, clothes, pays and renders other services for Navymen serving at the U.S. Naval Academy. Although performing these functions, this ship is not classified as an APL (barracks ship). It's an IX-Unclassified *Miscellaneous*.

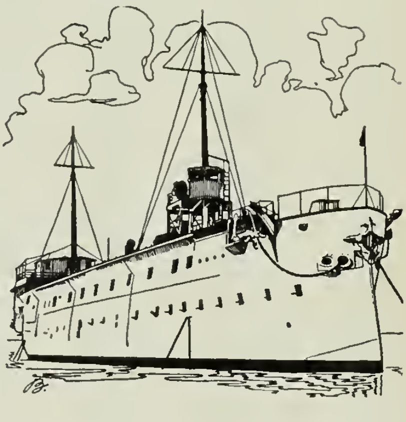
Unclassified *Miscellaneous*, is without a doubt, a proper title for USS *Reina Mercedes (IX 25)* as there is no other ship in the U.S. Navy quite like it. *Reina Mercedes* is in commission—has a captain as commanding officer—yet is a component of a shore-based facility, the U.S. Naval Station at Annapolis, which is maintained to support the Naval Academy.

Stories of the "*Reina*"—as the 278-foot ship is commonly called—are well known. She's considered to be the "fastest ship in the Navy." That's because she has been "fast" to her berth at the Naval Academy for so many years.

This is not the only distinction of the naval barracks. *Reina Mercedes* is believed to be the only prize of war currently in a commissioned status in the U.S. Navy.

Named in honor of Queen Mercedes of Spain, the former unarmored cruiser was built in 1887 at Cartagena, Spain. She was built during the period when navies of the world were undergoing the transition from sail to steam. Rigged as a three masted schooner, *Reina* was capable of being driven by both sail and steam. With her 4400-horsepower she could cruise at 17½ knots.

Although rated as an unarmored cruiser, she was equipped with six 16cm and 11 smaller guns, as well as five torpedo tubes.



The former pride of the Spanish fleet became a unit of the U.S. Navy in 1903 and served for the next eight years as the receiving ship at Newport, R. I. Early in 1912, she returned to Norfolk for an overhaul and refit and on 30 September arrived at Annapolis to relieve USS *Hartford*—Admiral Farragut's flagship during the Civil War—as station ship.

Since 1912 *Reina* has served continuously as the station ship at Annapolis except during brief periods in 1916, 1927, 1932, 1939, and 1951, when she was towed to the Navy Yard at Norfolk for dry-docking and overhaul.

***Reina Mercedes* served under the Spanish flag for 11 years before being sunk on 4 Jul 1898. In March of the following year, she was raised from the bottom of Santiago Harbor, Cuba, and towed to Norfolk, Va., where she was overhauled and converted.**

***Reina* also serves as headquarters for the Academy's sailing activities, as well as a lookout and harbor control center.**

TABLE I

NUMBER WHO PASSED AND MAY BE ADVANCED TO EACH RATE AS THE RESULT OF THE AUGUST 1956 EXAMINATIONS

Rating	No. who passed	No. who may be advanced	No. who passed	No. who may be advanced	No. who passed	No. who may be advanced
	E-4		E-5		E-6	
BM	3732	415	1430	47	1556	48
QM	822	822	329	329	185	136
RD	1258	1258	688	688	246	246
SO	489	489	489	489	112	112
TM	365	365	141	141	191	37
GM	1784	1573	692	341	839	24
GS	60	60	22	22	8	8
FT	1120	1120	535	535	200	152
MN	158	107	82	30	37	6
ET	1119	1119	667	667	306	233
IM	73	73	15	15	11	2
OM	38	38	17	17	9	9
TE	724	724	391	391	198	150
RM	1406	1406	601	601	252	252
CT	509	509	303	303	129	129
YN	2238	2238	884	884	295	70
PN	1532	1251	372	372	134	134
MA	132	132	52	52	56	2
SK	1465	1465	512	512	296	157
DK	490	490	149	149	79	14
CS	1184	933	797	87	1173	36
SH	1086	750	524	145	367	10
JO	138	113	30	30	13	13
LI	146	53	63	30	35	3
DM	148	148	38	38	14	14
MU	197	197	74	74	38	38
MM	2494	2494	1099	1099	681	681
EN	1860	1860	796	796	686	76
MR	472	472	154	154	79	79
BT	1957	1957	675	675	416	416
EM	1746	1746	948	948	464	464
IC	674	674	336	336	94	94
ME	629	629	264	264	262	8
FP	634	430	346	346	161	73
DC	602	602	241	241	236	7
PM	44	44	8	8	4	4
ML	47	36	13	13	11	4
SV	109	75	18	18	4	4
CE	155	155	59	59	35	35
CD	350	54	281	116	90	26
CM	226	84	111	80	48	10
BU	333	333	138	138	50	50
SW	104	104	53	53	20	15
UT	98	98	61	61	24	24
AD	2256	2256	818	818	1119	36
AT	1508	1508	550	550	331	331
AO	777	777	377	377	261	10
AQ	23	23	8	8	24	24
GF	19	19	4	4	13	10
AC	520	520	127	127	89	89
AB	1793	635	325	227	115	12
AE	782	782	254	254	163	163
AM	1576	1576	395	395	344	141
PR	141	141	48	48	72	25
AG	318	318	169	169	65	65
TD	196	196	144	144	61	50
AK	895	634	154	154	84	12
PH	521	364	241	241	85	30
HM	2808	2009	1314	1029	850	26
DT	747	747	138	138	86	9
SD	2146	79	1042	33	787	23

How Will You Make C

Thinking about the February exam? Weighing your chances for promotion? Or has the division cynic persuaded you that you don't have a chance?

Perhaps opportunities aren't so good in some rates or ratings as in others, but generally speaking, advancement opportunities have rarely been better. Here's the straight scoop concerning your prospects, not only for February, but the possibilities for the forthcoming years.

You'll find in Table I the actual number of Navymen, by rate and pay grade, who passed the examinations held in August and the number who were included in the quota for advancement to each rate on a service-wide basis.

Tables II and III contain estimates of the results of the February exams. These estimates are based on available statistics, study of past performance and an estimate of all the variables which might affect the number who may be included in advancement quotas. Although this data may be changed as circumstances dictate, it will at least give you a good idea of your opportunities and the competition you'll face.

A study of Table III will show that future advancement opportunities average out pretty well. There will be increased opportunity in some rates; in others, prospects aren't so good.

To become factual, however, you'll notice that there are 24 E-7, 25 E-6, 52 E-5 and 41 E-4 rates in which it is expected that all or nearly all who pass the examinations will be advanced. Take a look, for example at the advancement opportunities in the RD, GS, SO, RM, CT, MR, BT, EM, IC, CE, BU, UT, AT, AQ, AC, AE and AG ratings. Advancement here, where there are expected to be no limiting advancement quotas after the February exams, will be determined solely on your own ability.

Obviously, for those rates in which there are more men than jobs, advancements will be limited.

In this connection, bear in mind that BuPers Inst. 1440.18 establishes a program which enables you, if you

Advancement Exams?

hold a certain rating in pay grade E-4 or E-5 to change your rating to one in which there is a pronounced need for additional POs.

As you know, it has been decided to hold additional examinations in May and November for certain E-4 rates. This will provide additional opportunities for men in the ratings where they are most needed. Examinations are conducted in May and November only for those rates in which there is a need for additional personnel. It is assumed that all recommended candidates passing the examinations in these periods will be advanced to pay grade E-4.

What about PO1s and CPOs? A forthcoming issue of ALL HANDS will present a report showing the onboard strength and requirements as of now, related to number of individuals completing 20 years' service in the next few years. The report will show that transfers to the Fleet Reserve and inactive duty will open additional advancement opportunities to higher pay grades in those ratings which today are considered to be crowded.

You'll also notice that opportunities for strikers are excellent in many of the ratings which are crowded in the top two pay grades but in which there are shortages in pay grades E-4 and E-5. If, for example, you are a striker in the QM, TM, FP, AD, AO or AM ratings, your chances are good.

The present opportunities in the RD, GS, SO, RM, CT, MR, BT, EM, IC, CE, BU, UT, AT, AQ, AC, AE and AG ratings should not be assumed to mean that large numbers of personnel in pay grades E-6 and E-7 can be changed to any one of these ratings. The addition of large numbers of senior petty officers to numerically small ratings would block future advancements for a long time to come. Changes in higher pay grades for these ratings will be limited to insure that future opportunities for advancement are maintained for junior petty officers now in or changing to this rating.

That's our interpretation. Here are the facts presented in table form.

TABLE II

ESTIMATES ON NUMBERS WHO WILL PARTICIPATE AND NUMBERS WHO WILL PASS FEBRUARY 1957 EXAMINATIONS

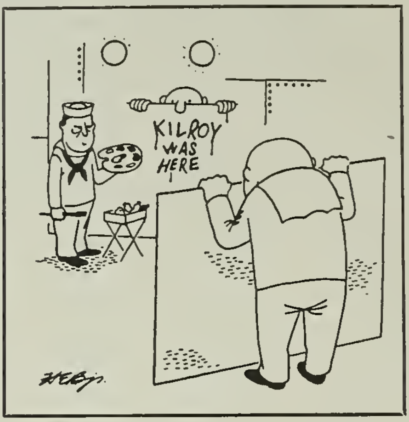
Rating	*Pay Grade E-7*		*Pay Grade E-6*		*Pay Grade E-5*		*Pay Grade E-4*	
	Take Exam	*Will pass*	*Take Exam*	*Will pass*	*Take Exam*	*Will pass*	*Take Exam*	*Will pass*
BM	3275	1000	3500	1500	2850	1425	6100	4820
QM	400	140	170	70	250	125	400	320
SM	500	175	210	90	420	210	500	400
RD	320	130	600	250	1520	760	820	650
SO	250	100	260	110	960	480	250	200
TM	690	140	430	180	450	225	280	220
GM	1750	500	1940	810	1400	700	2300	1820
GS	80	25	30	10	60	30	100	80
FT	570	190	460	190	1200	600	—	—
FTG	—	—	—	—	—	—	20	15
FTM	—	—	—	—	—	—	190	150
FTU	—	—	—	—	—	—	280	220
FTA	—	—	—	—	—	—	230	180
FTL	—	—	—	—	—	—	80	60
FTE	—	—	—	—	—	—	80	60
MN	65	25	80	35	180	90	240	190
ET	900	360	700	300	1500	750	—	—
ETN	—	—	—	—	—	—	330	260
ETR	—	—	—	—	—	—	430	340
ETS	—	—	—	—	—	—	85	70
IM	35	12	25	10	35	18	100	80
OM	35	15	15	6	36	18	80	60
TE	215	80	440	190	900	450	1020	810
RM	725	210	560	240	1300	650	1000	790
CT	320	175	300	130	600	300	400	320
YN	1100	390	670	280	1700	850	2700	2130
PN	460	185	300	130	800	400	1800	1420
MA	160	70	130	55	120	60	140	110
SK	850	335	630	270	1120	560	2200	1740
DK	310	100	160	70	300	150	600	470
CS	2400	750	2700	1140	1580	790	1800	1420
SH	670	230	840	350	1050	525	1500	1190
JO	30	13	30	13	70	35	200	160
LI	95	30	80	35	130	65	200	160
DM	30	13	30	13	100	50	200	160
MU	100	30	90	40	160	80	240	190
MM	1350	525	1600	670	2800	1400	2000	1580
EN	2300	720	1600	670	1600	800	2650	2090
MR	200	80	190	80	400	200	300	240
BT	1000	460	960	400	1600	800	1600	1260
EM	925	375	1070	450	2200	1100	1400	1100
IC	170	60	220	90	760	380	400	320
ME	870	315	600	250	600	300	860	680
FP	340	110	370	160	700	350	720	570
DC	720	260	550	230	480	240	800	630
PM	10	6	10	4	20	10	90	70
ML	25	10	25	10	30	15	60	50
SV	44	2	10	4	40	20	170	140
CE	40	13	80	35	160	80	200	160
CD	110	30	200	86	560	280	500	400
CM	100	35	110	45	240	120	300	240
BU	75	25	120	50	360	180	380	300
SW	40	10	50	20	110	55	160	130
UT	35	15	55	25	140	70	160	130
AD	4400	1600	2600	1100	2000	1000	—	—
ADJ	—	—	—	—	—	—	1400	1100
ADR	—	—	—	—	—	—	1400	1100
AT	1400	375	800	340	1460	730	1100	870

(Continued on next page)

If You're in a Crowded Rating, Now's the Time to Change

To provide better career opportunities for Navymen in ratings where advancement has been restricted, a program has been established which will enable these men either to attend schools or to qualify through in-service training for change to ratings in which the need is greater.

To correct the present surplus in the crowded ratings, a substantial number of E-4s and E-5s may be converted to ratings in which shortages exist and the ratings for which E-3s are strikers are to be adjusted in so far as practicable to meet the Navy's requirements.



It has been found that quota restrictions on advancement in some ratings have allowed an individual to progress no farther than pay grade E-5 while an individual of equal ability, during the same period of service, will have advanced to pay grade E-7 in a rating where advancement opportunities are unrestricted. In many of the ratings from which conversions are desirable, there are still large numbers of personnel who could become qualified for change to one of the ratings where shortages exist and where advancement opportunities are much better.

There are a number of ratings such as TM, QM, AD, AM, and GF in which on-board strength exceeds requirements in pay grades E-6 and E-7, but in which there are shortages in pay grades E-4 and E-5. Since opportunities for advancement to PO1 and CPO have been limited in the past, and are limited right now, the Navy has found it impracticable to establish a conversion to these ratings at the present time. And, since considerable numbers of senior petty officers in these ratings will complete 20 years' service within the next three or four years, there will be excellent advancement opportunities for personnel entering these ratings from pay grade E-3.

During fiscal year 1957, about 85,000 new POs must be trained and qualified for advancement to pay grade E-4. Of this number, it is anticipated that about 41,000 will be Class-A-School trained. The balance will be in-service trained.

There are two paths of conversion to Navymen in pay grades E-4 and E-5 who wish to qualify for change to the ratings where there is a need for additional personnel. These are:

In-Service Training — Navymen who have acquired the required qualifications through in-service training may request a change in rating under the provisions of BuPers Inst. 1440.5A (concerned with change in rate, rating and rate symbols).

Formal School Training — Navymen ordered to schooling for more than 20 weeks will be reassigned upon completion of the course. TAD orders may be requested for those applying for a course which is less than 20 weeks so that they may be available to their own unit upon completion of the course. In some cases, additional Class C courses will be provided.

The eligibility requirements for formal school training for the purpose of a change in rating are:

- Must have necessary obligated service as shown in Table II.
- Must meet the test score re-

TABLE II (continued)

ESTIMATES ON NUMBERS WHO WILL PARTICIPATE AND NUMBERS WHO WILL PASS FEBRUARY 1957 EXAMINATIONS

Rating	Pay Grade E-7		Pay Grade E-6		Pay Grade E-5		Pay Grade E-4	
	Take Exam	Will pass	Take Exam	Will pass	Take Exam	Will pass	Take Exam	Will pass
AO	1000	330	600	250	760	380	—	—
AOU	—	—	—	—	—	—	1050	830
AOT	—	—	—	—	—	—	180	140
AQ	130	60	55	25	50	25	—	—
AQB	—	—	—	—	—	—	25	20
AQF	—	—	—	—	—	—	75	60
GF	175	50	30	15	70	15	70	55
AC	300	115	210	90	340	170	—	—
ACR	—	—	—	—	—	—	150	120
ACT	—	—	—	—	—	—	210	170
ACW	—	—	—	—	—	—	140	110
AB	230	60	270	115	660	330	—	—
ABG	—	—	—	—	—	—	580	460
ABU	—	—	—	—	—	—	1750	1380
AE	450	150	400	170	700	350	—	—
AEI	—	—	—	—	—	—	470	370
AEM	—	—	—	—	—	—	230	180
AM	1330	500	800	340	1050	525	—	—
AMH	—	—	—	—	—	—	900	710
AMS	—	—	—	—	—	—	1200	950
PR	325	95	170	70	110	55	—	—
PRM	—	—	—	—	—	—	45	35
PRS	—	—	—	—	—	—	105	80
AG	170	55	150	65	420	210	450	360
TD	190	80	160	70	360	180	400	320
AK	260	75	180	75	380	190	1000	790
PH	320	100	200	85	500	250	—	—
PHA	—	—	—	—	—	—	140	110
PHG	—	—	—	—	—	—	560	440
HM	2280	825	2000	840	2600	1300	4000	3160
DT	330	115	200	85	230	115	930	730
SD	1500	500	1800	760	2000	1000	3200	2530

quirements shown in Table II. Waivers will be considered as appropriate.

- Must be recommended by commanding officer.
- Must be a volunteer.
- Must be in a rating shown in Table I below.
- Must meet the security clearance requirements for the school concerned.

If you meet the eligibility requirements above, you may submit your request for school to the Chief of Naval Personnel (Attn: Pers B213) via your commanding officer. Your request must contain three choices, listed in order of preference, as to which conversions are desired. Your first choice will be honored whenever possible but, in some cases, the needs of the service may require that you be assigned to a school of your second or third choice.

You will be advised of the action taken and, if you are selected and cannot be assigned immediately, you will be placed on a waiting list for assignment at a later date.

If you are selected and ordered to a conversion course, you will not be penalized in advancement as a result of assignment. BuPers Inst. 1430.7B (which is concerned with advancement in rating of enlisted personnel) provides that students under instruction for purposes of change in rating may elect to compete for advancement in their present rating or in the rating for which they are receiving instruction. If ordered to formal school training, your change in rating will be made upon successful completion of the course.

Those now undergoing conversion training under orders or on the waiting list will retain their present status and will not be required to resubmit requests for conversion training.

What about CPOs and POIs? It just isn't practical to establish a general program for the change in rating of personnel in pay grades E-6 and E-7. However, changes in rating at these levels are not prohibited. Those who have acquired sufficient in-service experience to qualify for a change in rating may request such a change. Individuals in the top two pay grades may, in exceptional circumstances, receive formal training for change in ratings where the needs of the service make such training desirable. Personnel in ratings

TABLE III

ESTIMATES ON PROPORTION OF THOSE PASSING THE FEBRUARY 1957 EXAMINATIONS WHO WILL BE ADVANCED

Rating	*Pay Grade E-4*	*Pay Grade E-5*	*Pay Grade E-6*	*Pay Grade E-7*
BM	3-10%	3-10%	3-10%	3-10%
QM	76-100%	76-100%	11-50%	11-50%
SM	76-100%	76-100%	11-50%	11-50%
RD	76-100%	76-100%	76-100%	76-100%
SO	76-100%	76-100%	76-100%	76-100%
TM	76-100%	76-100%	3-10%	11-50%
GM	51-75%	3-10%	3-10%	3-10%
GS	76-100%	76-100%	76-100%	76-100%
FT	76-100%	76-100%	51-75%	51-75%
MN	11-50%	11-50%	11-50%	11-50%
ET	76-100%	76-100%	51-75%	51-75%
IM	76-100%	76-100%	11-50%	51-75%
OM	76-100%	76-100%	76-100%	3-10%
TE	76-100%	76-100%	11-50%	76-100%
RM	76-100%	76-100%	76-100%	76-100%
CT	76-100%	76-100%	76-100%	76-100%
YN	76-100%	76-100%	11-50%	11-50%
PN	11-50%	76-100%	76-100%	76-100%
MA	76-100%	76-100%	3-10%	11-50%
SK	76-100%	76-100%	51-75%	51-75%
DK	51-75%	76-100%	11-50%	11-50%
CS	11-50%	3-10%	3-10%	11-50%
SH	11-50%	11-50%	3-10%	11-50%
JO	11-50%	76-100%	76-100%	11-50%
LI	11-50%	11-50%	3-10%	11-50%
DM	51-75%	76-100%	76-100%	76-100%
MU	76-100%	76-100%	76-100%	76-100%
MM	76-100%	76-100%	76-100%	51-75%
EN	76-100%	76-100%	3-10%	11-50%
MR	76-100%	76-100%	76-100%	76-100%
BT	76-100%	76-100%	76-100%	76-100%
EM	76-100%	76-100%	76-100%	76-100%
IC	76-100%	76-100%	76-100%	76-100%
ME	76-100%	76-100%	3-10%	11-50%
FP	51-75%	76-100%	11-50%	51-75%
DC	76-100%	76-100%	3-10%	11-50%
PM	76-100%	76-100%	76-100%	51-75%
ML	51-75%	76-100%	11-50%	11-50%
SV	11-50%	76-100%	76-100%	51-75%
CE	76-100%	76-100%	76-100%	76-100%
CD	11-50%	11-50%	11-50%	76-100%
CM	11-50%	51-75%	3-10%	51-75%
BU	76-100%	76-100%	76-100%	76-100%
SW	76-100%	76-100%	11-50%	76-100%
UT	76-100%	76-100%	76-100%	76-100%
AD	76-100%	76-100%	3-10%	3-10%
AT	76-100%	76-100%	76-100%	76-100%
AG	76-100%	76-100%	3-10%	3-10%
AQ	76-100%	76-100%	76-100%	76-100%
GF	76-100%	76-100%	11-50%	11-50%
AC	76-100%	76-100%	76-100%	76-100%
AB	3-10%	51-75%	3-10%	76-100%
AE	76-100%	76-100%	76-100%	76-100%
AM	76-100%	76-100%	11-50%	51-75%
PR	76-100%	76-100%	3-10%	51-75%
AG	76-100%	76-100%	76-100%	76-100%
TD	76-100%	76-100%	51-75%	11-50%
AK	11-50%	76-100%	3-10%	51-75%
PH	51-75%	76-100%	11-50%	51-75%
HM	11-50%	76-100%	3-10%	3-10%
DT	11-50%	76-100%	3-10%	11-50%
SD	3-10%	3-10%	3-10%	3-10%

that are drastically limited by advancement quotas will be considered for change to ratings where advancement prospects are better. Action upon requests for formal training will be based upon the availability of school quotas and the need for additional petty officers in the rating requested.

In the right hand column is a table showing conversion of petty officers in pay grades E-4 and E-5 during the current fiscal year.

Note: The BM, GM, CS, SH, DC, CD, AB and SD ratings are the source ratings from which personnel may qualify through formal school or in-service training for change in rating. The "Minimum Annual Goal" is the minimum number of petty officers in pay grades E-4 and E-5 required to be trained for change of that rating during the current fiscal year. The "Number Required to Balance the Rating Structure" is the total number of additional petty officers needed to meet planned requirements.

Included in both figures are the numbers to be trained through both in-service and school training.

Rating	Minimum Annual Goal	Number Required to Balance Rating Structure
RD	50	2000
GS	150	150
FT	500	500
ET	800	1200
RM	100	1800
CT(R)*	100	800
MM	100	2200
MR	20	200
BT	100	1300
EM	100	1800
IC	50	800
AT*	600	4400
AQ*	50	1500
AC*	150	1500
AE*	50	2200

* School training will be provided for all conversions.

Personnel in the YN and SK ratings in pay grades E-4 and E-5 are eligible for conversion through in-service training for change to the MA rating. Twenty is the minimum annual goal and 100 are required to balance rating structure.

Schools and Courses Available for Conversion Training

Rate	Eligible Personnel	Schools	Approx. School Length	Obligated Service	Requirements
AC	All source ratings	AN Class "P"	9-18 weeks	24 months	GCT-ARI-110. Meet physical requirements of Art. 15-69 (12) *BuMed Manual* Normal Color perception. Clear speaking voice.
AE	All source ratings	AN Class "P" AE Class "A"	21 weeks	36 months	GCT-MECH or MK ELECT-105. Normal color perception.
AQ	All source ratings	AN Class "P", AQ Class "A"	30 weeks	36 months	GCT-ARI-110 and MECH or MK ELECT-50. Normal color perception.
AT	All source ratings	AN Class "P", AT Class "A"	24 to 28 weeks	36 months	GCT-ARI-110 and MECH or MK ELECT-50.
BT	All source ratings	BT Class "A"	10 weeks	24 months	ARI-MECH or MK MECH-105.
CT(R) Branch	All source ratings	CT/R Class "A"	24 weeks	36 months	GCT-ARI-100. Normal color perception and hearing.
EM	All source ratings	EM Class "A"	14 weeks	24 months	GCT-MECH or MK ELECT 105. Normal color perception.
ET	All source ratings	ET conversion course	40 weeks	42 months	GCT-ARI-110 and MECH or MK ELECT 50. Normal color perception.
FT	All source ratings	FT conversion course	44 weeks	42 months	GCT-ARI-110 and MECH or MK ELECT-50. Normal color perception.
GS	All source ratings	GS conversion course	32 weeks	36 months	ARI-MECH-110. Normal color perception
IC	All source ratings	IC Class "A" IC Class "C" (GYRO)	26 weeks	36 months	GCT-MECH or MK ELECT-105. Normal color perception.
MA	YN and SK only	No school*		24 months	GCT-ARI-110.
MM	All source ratings	MM Class "A"	12 weeks	24 months	GCT-ARI or MK ELECT-105.
MR	All source ratings	MR Class "A"	12 weeks	24 months	ARI-MECH or MK ELECT-105.
RD	All source ratings	RD Class "A"	20 to 24 weeks	36 months	GCT-ARI-105. Normal color perception. Normal near vision.
RM	All source ratings	RM Class "A"	16 to 24 weeks	24 or 36 months	GCT-ARI-100. Normal color perception and hearing.

* Personnel are ordered to specific activity for in-service training.

List of New Motion Pictures Available for Distribution To Ships and Overseas Bases

The latest list of 16-mm. feature movies available from the Navy Picture Service, Bldg. 311, Naval Base, Brooklyn 1, N. Y., is published here for the convenience of ships and overseas bases. The title of each picture is followed by the program number. Those in color are designated by (C) and those in widescreen processes by (WS).

These films are leased from the movie industry and distributed free to ships and most overseas activities under the Fleet Motion Picture Plan.

Seven Cities of Gold (644) (C) (WS): Drama; Richard Egan, Anthony Quinn.

The Last Hunt (645) (C): Western Drama; Robert Taylor, Debra Paget.

The Littlest Outlaw (646) (C): Drama; Pedro Armendariz, A. Velasques.

Congo Crossing (647) (C): Drama; Virginia Mayo, George Nader.

Away All Boats (648) (C): Adventure Drama; Jeff Chandler, Julie Adams.

The Girl In The Red Velvet Swing (649) (C) (WS): Murder Drama; Ray Milland, Joan Collins.

The Proud And The Profane (650) Drama; William Holden, Deborah Kerr.

A Kiss Before Dying (651) (C):

QUIZ AWEIGH ANSWERS

QUIZ AWEIGH IS ON PAGE 11

1. (b) USS *Albacore* (AGSS 569)
2. (a) It has a tear-drop shape and single screw.
3. (c) USS *Nautilus* (SS 168)
4. (a) *Narwhal* class
5. (b) USS *Bonita* (SSK 3)
6. (b) 47

Drama; Robert Wagner, Virginia Leith.

The Werewolf (652): Horror; Don McGowan, Joyce Holden.

20,000 Leagues Under The Sea (653) (C): Action Drama; Kirk Douglas, James Mason.

Good Morning, Miss Dove (654) (C) (WS): Drama; Jennifer Jones, Robert Stack.

Lady And The Tramp (655) (C): Cartoon Characters.

I've Lived Before (656): Drama; Jock Mahoney, Leigh Snowden.

That Certain Feeling (657) (C): Comedy; Bob Hope, Eva Marie Saint

Foreign Intrigue (658) (C): Mystery; Robert Mitchum, Genevieve Page.

The Rains Of Ranchipur (659) (C) (WS): Drama; Lana Turner, Richard Burton.

Pardners (660) (C): Comedy; Dean Martin, Jerry Lewis.

The Vagabond King (661) (C): Musical; Kathryn Grayson, Oreste.

Miami Expose (662): Drama; Lee J. Cobb, Patricia Medina.

Trapeze (663) (C): Drama; Burt Lancaster, Gina Lollobrigida.

Hilda Crain (664) (C) (WS): Drama; Guy Madison, Jean Simmons.

Star of India (665) (C): Drama; Cornel Wilde, Jean Wallace.

Raw Edge (666) (C): Drama; Rory Calhoun, Yvonne DeCarlo.

Massacre (667): Adventure Drama; Dane Clark, James Craig.

Autumn Leaves (668): Drama; Joan Crawford, Cliff Robertson.

23 Paces To Baker Street (669) (C) (WS): Drama; Van Johnson, Vera Miles.

Hold Back The Night (670): Drama; John Payne, Mona Freeman.

He Laughed Last (671) (C): Musical; Frankie Laine.

Gun Brothers (672): Western; Buster Crabbe, Ann Robinson.

Forbidden Planet (673) (C): Science-Fiction; Walter Pidgeon.

Promotions for 1575 Officers Recommended by Boards

The selection of 1503 line lieutenants for promotion to lieutenant commander, 71 Wave lieutenants junior grade to lieutenant, and one Reserve captain to rear admiral in the Dental Corps, has been approved by the President.

Of the selectees for lieutenant commander, 1361 are line officers and 126 are in the restricted line categories. The board included 16 women line officers in selections.

The 71 women lieutenants junior grade of the line were recommended by a selection board which considered those Wave officers with dates of rank of 31 Dec 1954, and earlier.

Captain William H. Christensen was selected for temporary promotion to Rear Admiral in the Dental Corps of the Naval Reserve.

WAY BACK WHEN

Early Version of PT Boats

"Build as many barges as can be manned, form them into a 'Flying Squadron' and let them continually watch and annoy the enemy, following him in every direction. The enemy dare not dispatch small ships, brigs or schooners upon any expedition while such a force was near them."

This concept was expressed in 1813 by Commodore Joshua Barney, naval hero of the Revolutionary War. Baltimore and Washington were threatened by the British fleet under Admiral Warren, and later under Admiral Cochrane, when Barney was appointed to the command of the Chesapeake flotilla.

"Our ships (two frigates) cannot act, our old gunboats are too heavy to sail and too clumsy to row," Barney told the Maryland Assembly in recommending the barges. As he saw it, the only defense possible at that time was to "build a kind of barge, as row-galley, so constructed as to draw a small draft of water, carry light oars and light sails and one heavy long gun."

Barney pointed out that his proposed barges could be moved rapidly at any time to any point, and, if necessary, could transport troops in addition to their crews. If desired, the force would "always be hovering near the enemy to prevent any partial attacks on the Bay shore or within waters adjacent." The Flying Barge Squadron could harass the enemy at night by slipping between the British ships and keeping up a constant fire against them.

The persuasive Barney must have been a salesman, for the Maryland Senate passed a bill in 1813 for the fitting and manning of 20 barges. Ten of these barges were actually built, and with three gunboats, they formed Barney's miniature fleet. They saw action against the British the following year.

Owing to the overwhelming strength of the British fleet, the barges were not so effective as Barney had hoped they would be. Before Barney could assume the offensive, the British neatly solved their problem by bottling the barges in the Patuxent River with the 74-gun Dragon, supported by several schooners and barges, as the cork.

This resulted in an unhappy situation for both opponents. Barney couldn't get out to "hover near the enemy," and the larger ships of the British could not go up the river to root out Barney. However, Admiral Cochrane did, on two occasions, send the ship's boats after Barney. As the boats did not equal Barney's strength, they were forced to turn back to the protection of the blockading ships.

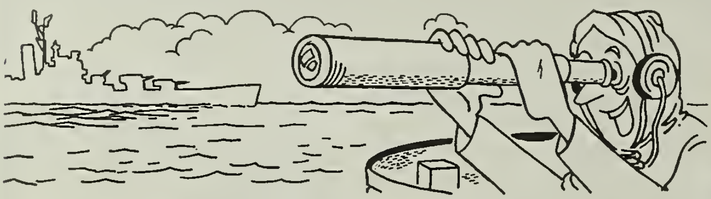
The fate of the barges was later decided by a detachment of Wellington's army under the command of Major General Ross. In August, Ross started up the banks of the Patuxent with support from Cochrane's flee. At the time, the bulk of Barney's bargemen had been ordered to abandon the barges to go to the defense of Washington. A small force was left to protect the deserted barges but, with the approach of General Ross, Barney's pet scheme for the protection of the Chesapeake went up in flames.

As described by Barney, the mission of his barges was similar to that of the PT boats of World War II. The barges weren't as successful, of course, but it may be that Barney was only a hundred years or so ahead of his time.

TAFFRAIL TALK

OLD-TIMERS MAY PROTEST that we are giving away some of their professional secrets but we'd like to invite the attention of the younger crew members to certain noble and ancient customs of indoctrination. On certain occasions, for example, USS *Boxer* (CVS 21) sets a mail buoy watch.

The watch is set up at any convenient location on the ship where the SA or SN has a fine, unobstructed view of the horizon. Regardless of the weather, he is equipped with all the foul weather gear he can carry and a telescope. His primary responsibility is to watch with undying vigilance for a buoy to which is attached the ship's mail although he may, if he sights any, report the presence of snipe or mermaids. The mail buoy watch is always stood at any unreasonable hour, preferably at a distance of 1000 or more miles from the nearest land.



★ ★ ★

It's real nice that every activity takes a pride in its accomplishments but this matter of needless boasting can be overdone. It has come to our attention that the Naval Research and Development Facility at Bayonne, N. J., has been conducting shipboard evaluation of compressed flour aboard USS *Monssen* (DD 798), *Cassin Young* (DD 793), *Benham* (DD 796) and *Hale* (DD 642). The facility claims to save 40 per cent space.

Hah! Don't tell us about compressed flour being new. We'll bet that some of our best friends (commissarymen, that is) have been using it for years, and they've even gone a step further. You should try their compressed biscuits.

★ ★ ★

However, justifiable pride is something else again. A few years back, Shelby P. Wright, MEC, drew recruiting duty in Texarkana, Ark. In 1955 he recruited his eldest son, Shelby P. Wright, Jr., into the Navy and last year he repeated the performance with his other son, Michael P. Wright. So far as we have been able to determine this incident is unique in the annals of the Navy.

Chief Wright, who has served 26 years on active duty, had no hesitation in recommending the Navy as a career for his sons. "I know of no greater career for a young man, than to serve his country with great pride in a Navy that is second to none. I am both happy and proud that both of my boys have chosen to follow me into the greatest outfit of them all," says Chief Wright. Mrs. Wright, who called the incident to our attention, whole-heartedly agrees with that statement.

There's little doubt that Shelby Wright, Jr., is thoroughly sold on the Navy. He married a Wave.

The All Hands Staff

The United States Navy

Guardian of our Country

The United States Navy is responsible for maintaining control of the sea and is a ready force on watch at home and overseas, capable of strong action to preserve the peace or of instant offensive action to win in war.

It is upon the maintenance of this control that our country's glorious future depends. The United States Navy exists to make it so.

We Serve with Honor

Tradition, valor and victory are the Navy's heritage from the past. To these may be added dedication, discipline and vigilance as the watchwords of the present and future. At home or on distant stations, we serve with pride, confident in the respect of our country, our shipmates, and our families. Our responsibilities sober us; our adversities strengthen us.

Service to God and Country is our special privilege. We serve with honor.

The Future of the Navy

The Navy will always employ new weapons, new techniques and greater power to protect and defend the United States on the sea, under the sea, and in the air.

Now and in the future, control of the sea gives the United States her greatest advantage for the maintenance of peace and for victory in war. Mobility, surprise, dispersal and offensive power are the keynotes of the new Navy. The roots of the Navy lie in a strong belief in the future, in continued dedication to our tasks, and in reflection on our heritage from the past. Never have our opportunities and our responsibilities been greater.

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The Bureau should be kept informed of changes in the number of copies required.

The Bureau should also be advised if the full number of copies is not received regularly.

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• AT RIGHT: FISHERMAN'S LUCK— R. O. Buell, MEC, USN, and C. A. Head, QMC, USN, return to USS Hamul (AD 20) after a deep-sea fishing party off Long Beach Harbor, Calif.

ON GUARD ★ ★ ★

★ ★ ★ MEN AND SHIPS

ALL HANDS

THE BUREAU OF NAVAL PERSONNEL INFORMATION BULLETIN

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FEBRUARY 1957

ALL HANDS

THE BUREAU OF NAVAL PERSONNEL INFORMATION BULLETIN

FEBRUARY 1957 Nav-Pers-O NUMBER 481

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The Chief of Naval Personnel

REAR ADMIRAL K. CRAIG, USN
The Deputy Chief of Naval Personnel

CAPTAIN O. D. FINNIGAN, Jr., USN
Assistant Chief for Morale Services

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- **FRONT COVER: CAREFUL TEAMWORK** is a must in handling mines. Here, crew members of *LCU 1363* swing practice mine over the side during MinPac minelaying exercises.
- **AT LEFT: MINLANT HONOR Guard** is inspected by VADM James L. Holloway, Jr., USN, as men of Atlantic Fleet Mine Force stand formation in honor of his visit to their Charleston, S.C., headquarters. RADM Neil K. Dietrich, USN, MinLant commander, and LTJG B. A. Wadsworth, USN, accompany the Chief of Naval Personnel.
- **CREDITS:** All photographs published in ALL HANDS are official Department of Defense Photos unless otherwise designated.

The MSB Story —

Little Ships Sweep the Sea

They're just little ships but they have a big job. The smallest are no more than the length of a standard whaleboat, the big boys are ocean-going 165-foot heavyweights.

They have as their primary mission "the task of freeing our sea lanes and keeping our coastal waters, harbors and channels clear of mines." Technically, this job is known as mine countermeasures. More informally, minesweeping.

They're just little ships, but they're special.

They range from small MSBs—used for sweeping shallow water and harbors—on up to the largest type, the ocean-going minesweepers (MSOs). These mine craft represent a "new-look" which is becoming more and more apparent throughout the Atlantic and Pacific Fleets. Newly constructed minesweepers are appearing in ever-increasing numbers, and as they do, the old "standard" types are being inactivated.

The Navy's "new look" in minesweepers features the wooden-hulled, non-magnetic ships and boats. They include the MSBs, the "Mighty Mites of the splinter Fleet"; the MSCs ("C" for coastal), which are 142 feet long and manned by a crew of 35 officers and men; the MSC(O)s, ("O" for old), which is the standard wooden-hulled minesweeper of WW II, (formerly designated YMS and later AMS), and the MSOs (ocean minesweepers). But let's take the MSB as an example.

MSBs are minesweeping *boats*. They were specifically designed for minesweeping duties but are not designated as minesweeping vessels nor classified as combatant ships. They're designated as service craft, yet assigned to the Atlantic and Pacific Fleet Mine Forces.

All but two Atlantic Fleet MSBs are at present based at Charleston, S. C. The two render services to the Mine Warfare School at Yorktown, Va. The Charleston-based boats make up Mine Divisions 101 and 102 which comprise Mine Squadron 10. Each division has two sections, with a CPO in administrative control of each. MSBs assigned to MinDivs 111, 112 and 113 (MinRon 11) are based at Long Beach, Calif.

The MSBs are only 57 feet long. When fully loaded they displace about 44 tons. They are made of laminated wood and equipped with special type gear. The anchors are of brass, and other equipment which *must* be made of metal is usually aluminum or magnesium.

Even the engines and tools to service them are of a non-magnetic

MINEMEN MAKE A SPLASH as the pig hits water. Crew members of *MSB 43* practice sweeping operations in the harbor waters of Charleston, S. C.

o Keep It Free

material. Each boat has two six-cylinder Diesel engines which can produce 300 horsepower each. Driven by twin screws, the mighty mites are capable of cruising at a top speed of 12 knots.

The MSBs also have four gas-turbine engines which drive the generators which in turn produce the high-voltage electricity needed for sweeping magnetic and acoustic mines. Each generator is capable of producing an average of 200kw or a maximum of 1500 amperes at 2000 RPM.

Small as they are, the MSBs carry the same type minesweeping gear as their bigger sisters, the MSCs and MSOs, and are capable of sweeping contact or influence mines. The only difference in the gear is the generators, which are smaller on the 57-foot MSBs than on the larger coastal and harbor sweepers.

The Charleston-based MSBs usually operate on a day-to-day basis. They get underway shortly after dawn and, as a rule, return to the minecraft base before dark. They operate with other MSBs and quite often with MSCs and MSOs. They usually operate for three weeks and then have a breathing period to catch up on paper work and other administrative matters. (MSBs maintain approximately 28 logs and reports, just about the same number as on the largest combat ship afloat.)

The MSBs participate in type training, special competitive exercises and "ISE"—Independent Ship Exercises. The competitive exercises are usually conducted between the sections in each division and are based on the requirements set forth in the various Atlantic Fleet, ComMinLant and Squadron training manuals. In these exercises, the MSBs, conduct all types of minesweeping, collision, abandon ship, man overboard, scuttle ship, towing and steering ship drills.

The MSBs undergo rigid administrative and material inspections—just as the big ships do—every six months. In addition, in compliance with ComMinLant policy, Squadron and Division Commanders hold personnel inspection aboard every two weeks.

The 57-foot sweepers are usually manned by a crew of six enlisted men. This includes a chief or first class boatswain's mate or quartermaster who, as petty officer in charge, acts as CO; engineman; electrician's mate, boatswain's mate and two (sometimes three) seamen.

At Charleston, the MSB crew members who are not married and living ashore, are berthed and messed in *APL 43*. This barracks ship, moored to a pier at the Minecraft Base, serves as barracks, mess hall, recreation and repair ship, as well as headquarters for MinRon 10 and MinDivs 101 and 102.

Each of the MSBs has a small corner in the bow which serves as a galley. In addition to a two-burner hot-plate, they are equipped with a sink, and an electric coffee pot which is usually in use from dawn to midnight. They also have a portable ice box aboard and a tank which holds 20 gallons of fresh water. With a small head and two built-in bunks, the MSBs are provided with sufficient accommodations for normal operations.

To qualify as petty officer in charge of an MSB the chiefs and first class boatswain's mates or quartermasters must undergo extensive specialized training at the Mine Warfare Schools at Yorktown, Va. There, the prospective MSB skippers are given a thorough course in visual and radio communications, minesweeping procedures and tactics, damage control, engineering, piloting, formation tactics and maneuvers, as well as seamanship and Rules of the Road.

These senior enlisted men assigned duty as MSB skippers are given responsibilities and opportunities that cannot be equaled in any other duty in the Navy. Although chiefs and PO1s are given command of landing craft, harbor tugs or other yard and

EYES FOR TROUBLE—Skipper of MSB keeps sharp look out as his craft makes a practice run with the sweeps.

MINPAC sailor holds line as MSB returns from training run. The 'mighty mites of the splinter Fleet' are made of wood and non-magnetic metals.

SKIPPER of *MSB 43* is J. W. Kocur, QMC, of Minlant, and captain of *MSB 20* is *J. J. Polackwich*, BM1, of MinPac.

service craft, MSB skippers regard such assignments as child's play.

Joseph W. Kocur, QMC, USN, is typical of the chosen few, whether in MinLant or MinPac. He's in command of the Charleston-based *MSB 43*. Chief Kocur has been in the Navy for the past 15 years and eight of those years have been with the Atlantic or Pacific Fleet Mine Force. He has been skipper of *MSB 43* for about 25 months. He picked up his first command at the building yards in Dorchester, Mass., and brought her down to Charleston.

Chief Kocur is well qualified for his present duties. During World War II he served in PTs. He then had duty in USS *Thompson* (AMS 38) and USS *Hornbill*, formerly AMS 19, now MSC(0)19. He was on board Hornbill when she transferred from MinPac to MinLant.

UP FROM ENGINEROOM — Crew member poses for a photo. Minesweeping boats have crew of six.

"The duty is tops," says Kocur. "The best any chief could ever hope for. I'm more or less my own boss, and I have a crew I can depend on. What more can anyone ask?" As petty officer in charge of *MSB 43*, Chief Kocur has direct responsibility for all phases of the boat's operation. While streaming and recovering the gear, he directs the operations; while sweeping he's in charge of navigation, ammunition and communication; on Special Sea Detail, he's at the Conn. On board an MSB, skippers such as Chief Kocur must be a jack of all trades and master of them all. So should every crew member. Just as every man on board a submarine is a member of a well-versed team and must be able to take over the duties of one of his shipmates, all hands in a minesweeper work as a team, with each man knowing just what to do and when to do it.

"If I didn't know before. I certainly know now," says Kocur, "how much a skipper depends on his crew. Earlier, I took a lot of things for granted that are really serious now."

Not only does the MSB skipper receive specialized training, but so does the electrician's mate and engineman. That's because equipment aboard the mighty mites is unique—non-magnetic engines, built-in degaussing systems and generators driven by gas turbine engines (not found aboard many other ships).

Therefore, the engineman and electrician must be prepared to cope with the special problems which this type equipment encounters. The electrician must have a thorough understanding of mine countermeasures in order to operate the degaussing system properly and rig high voltage cables for sweeping magnetic and acoustic mines.

The engineman and electrician in whom Chief Kocur has so much faith are Joseph C. Senical, EN1, USN and Clifton Young, EM1, USN.

Senical has been in the Navy for more than 12 years, four of which have been with the Mine Force. As a single man, he loved destroyers, but now that he's married he prefers duty with the Mine Force (MSBs) —"the married man's Navy." Senical has two future Mine Force sailors, age 7 and 5.

Senical's duties are varied. His primary job is the operation and maintenance of all machinery aboard. The non-magnetic Diesel engines are a full-time job themselves. He does all the overhaul on them and after every 2000 hours of running time he must give them a complete overhaul. During operations he, like the others, can take his turn at the wheel, assist in streaming and recovering sweeping gear, man a rifle or serve as lookout.

The title of "sparks" goes to Young, who is a mere youngster in regard to service when compared to Kocur or Senical. He's been in the Navy a little more than five years but is well experienced for his duties on board the 43. He's been assigned to minecraft for over three years.

A graduate of Class "A" EM School and the mine warfare school, Young has served in the destroyer USS *Boyd* (DD 544), the escort vessel, *Cross* (DE 448), the ocean minesweeper, *Embattle* (MSO 434) and the mine hunter, *Bobolink* (MHC 44).

Like most married men, Young enjoys MSB duty. He operates and maintains all electrical equipment, rigs acoustic and magnetic sweeping gear, operates and maintains degaussing equipment, is the radio operator, assistant navigator and steersman. Both Young and Senical interchange their jobs when needed, but all crew members take turns with the other's work.

The title of first lieutenant and assistant to the OIC, is Domenick J. Razzi, BM1, who has 14 years' service—the last nine years with MinLant. He's responsible for the general upkeep and appearance of all other gear aboard. A top-notch seaman, he's the expert in regard to rigging, streaming and recovering all types of sweeping gear. Razzi has been aboard *MSB 43* for the past year. He earlier served as coxswain of ComMinLant's Barge, and for two years was based ashore at the Charleston Mine Craft Base. Earlier, he had five years of continuous sea duty on board USS *Tanager* (AM-385).

Razzi is married like all the other "43"-boat crew members. He owns his own home in Charleston. He thinks the duty is tops but doesn't like to admit it, "After all, he says, if we tell everyone how good this MSB duty is, they will be looking for my job." That feeling is shared by the majority of the MSB sailors. They know good duty and want to stay with it.

Rounding out the crew are two seamen—Carrol Lenoir and Ben T. Crider. Both of them have been on board one and a half years. They are responsible for the upkeep of the boat, and assist Razzi with streaming and recovering the sweep gear. They also stand lookout watches, take their turn at the wheel and "mess cooking."

Mine Force sailors have a lingo of their own. They talk in terms of "pigs," "oscars," "banana floats,"—"otters," "depressors" and "holidays." "Pigs" are floats with a black and red striped minesweeping flag which shows the position of the sweep. "Banana floats" are not ordered at the ice cream store. They are used for holding afloat non-buoyant electric cables used when sweeping influence-type mines. A "holiday" means a gap in a clearance-sweep of a channel, harbor or sealane.

MINESWEEPS of MinPac hold steady as they head back to the pack in Long Beach harbor after sweeping exercises in Pacific coastal waters.

MSB-43 and all other minesweeping boats of MinLant and MinPac have responsibilities just as great as the largest combatant ship afloat. As small as they may be, they have a vital role in carrying out the functions of our nation's over-all naval defense team. They have the intricate task of harbor and shallow-water mine sweeping.

Without them, what good would our super carriers, nuclear subs and guided missiles be if our harbors were secretly mined while these ships were in port?

—H. George Baker, JOC, USN

WATCHING OVER 'PIGS'—MinPac sailor is silhouetted against sky as he stands at stern of minesweeping boat moored with others at Long Beach, Cal.

Atomic Age Formula

The Mine Force: Wooden Ships and

FORMATION OF MSBs from Minlant cut through waters off Charleston, S.C. These sleek, speedy and salty woode

Although today's modern, complex Navy is built around nuclear power, guided missiles and fast carrier striking forces, the Navy also is returning to the "good ole days of wooden ships and iron men."

This is one of the latest trends, but don't think the Navy is going backwards. It's not. In fact, the Navy is steaming full speed ahead and making great strides in the highly complex business of mine warfare.

This "about face" is a result of the Korean conflict, which revolutionized Navy thinking in regard to mine warfare—so much in fact that the Navy today is once again mine-conscious as well as air- and submarine-conscious. The effects of Korea were immediate but lasting. They lead to the development of new types of non-magnetic, wooden-hulled ships and boats.

In today's Navy of tomorrow, mine warfare is considered to be an important function of naval power, rated with air, submarine, anti-submarine and amphibious warfare. This is just the opposite of the evaluation of mine warfare less than seven years ago when we went to war in Korea. At that time, U. S. mine forces were at an ebb. Our Pacific Fleet Mine Force Command had been disestablished and the Atlantic Fleet had only a small number of minesweepers in operation.

Things are different today. Commander Mine Forces, Pacific is very much in evidence and there are new developments every day. Take, as an example, the U. S. Naval Minecraft Base at Charleston, S. C., center of activity for the expanding Atlantic Fleet Mine Force.

A brief observation of the daily hustle and bustle, as well as the many accomplishments of the thousands of technicians and "iron men" assigned there, is enough to convince an observer of the new outlook and added importance the U. S. Navy is placing on mine warfare. If a first-hand view does not convince you, a visit with the determined boss of the Atlantic Fleet Mine Force will do so. He's Rear Admiral Neil K. Dietrich, USN, known as "ComMinLant," who has his headquarters at Charleston in a historic rice mill at the Minecraft Base located on the Ashley River.

The Commander, Mine Forces Atlantic, is so convinced of the importance of mine warfare that it would take him only a few minutes to have you feeling the same way. This veteran of more than 37 years of naval service is not a high-pressure salesman type but is a firm believer who speaks with authority and experience.

He knows of the Navy's problems when Task Force 90 encountered 50-year-old contact mines off the coasts of Korea. It's now his job to protect our carriers, high-speed destroyers, guided missile ships and nuclear submarines if an enemy were to plant the more recently developed influence type mines in U. S. waters.

The majority of the mines that gave the Navy trouble in October 1950 before the landing at Wonsan were pre-World War I mines. Most of them exploded only upon direct contact. Today, however, various types of influence mines are in use in addition to the older moored, contact-type mines. These new mines lie on the bottom and wait. As they are influenced by sound, pressure or magnetism, a ship doesn't even have to come in direct contact with them in order to set them off. They may be exploded by the noise of a ship's propeller, by the changes in water pressure caused by the passage of a ship through the water, or by the shifting lines of force of the earth's magnetic field resulting from the passage of steel-hulled ships. Mines have been developed to the stage where they will be actuated by any one of these influences or a combination of two or all three. Other types are also under development.

If an enemy were to plant any one of this type of mine in our sea lanes,

ron Men

harbors or coastal waterways, the units of the Navy's Mine Forces—both Atlantic and Pacific would have a job on their hands. However, the men in the mine force are continually training to face any such emergency that may arise. For example, it is ComMinLant's job to "maintain the personnel and ships of the Mine Force in the highest condition of readiness and efficiency, in order that units of the Force, individually and collectively, may accomplish at any time, the mission and tasks assigned." In addition, ComMinLant is the principal adviser to the Commander in Chief, U. S. Atlantic Fleet on all matters concerning mining and mine countermeasures.

aft are skippered by CPOs and PO1s.

This means that MinLant, which is one of the seven type commands assigned to the Atlantic Fleet, has a dual responsibility—that of laying mines and mine countermeasures. (MinPac has a similar setup). Mine countermeasures is actually the Mine Forces' biggest job—operations undertaken in order to reduce or eliminate the hazards caused by mines. This includes (1) the destruction of enemy mines before they are planted; (2) the destruction of enemy mine planting vehicles and location of mines by visual or electronic means as they are being planted; and (3) sweeping or destroying mines after they have been planted.

MINEMEN stand special formation in front of headquarters building of U. S. Atlantic Fleet Mine Force during mass reenlistment ceremonies.

Mine sweeping, MinLant's specialty, is a complex business. It has to be if MinLant is to fulfill its task of freeing our sealanes of mines and keeping our harbors and channels clear. MinLant is prepared for this job only as a result of hard work and continued training.

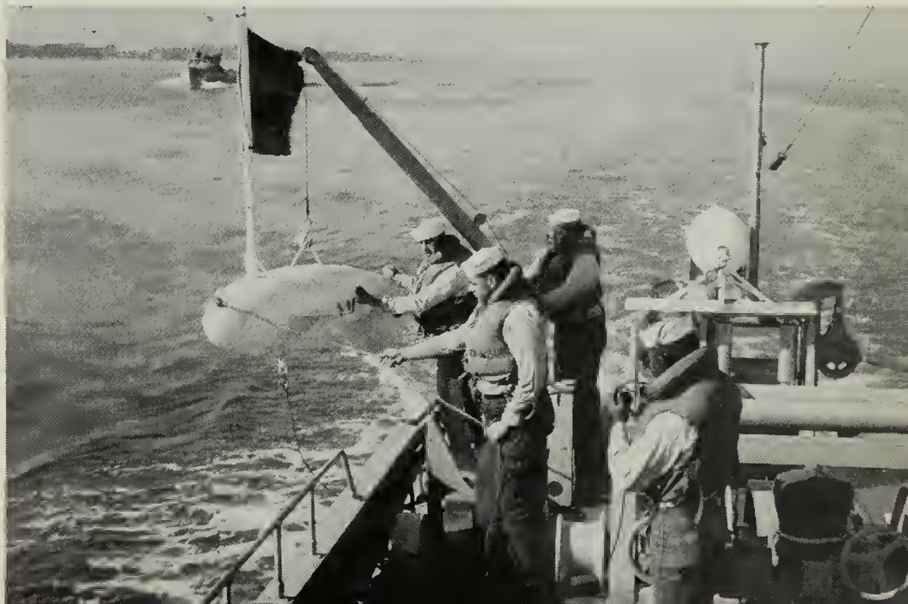
This training is specialized and is instrumental in knitting MinLant personnel into smoothly functioning teams. It covers tactics of minefield clearance; deck seamanship in streaming and recovering mine sweeping gear; shiphandling in close formation with gear streamed; operation and maintenance of complex magnetic and acoustic minesweeping gear; precision navigation; and mine hunting.

As mines get more complex, so do sweeping techniques. Contact type mines are the easiest to sweep. As MinLant sailors say, "they are just a matter of good seamanship, courage and endurance." Such mines are swept by a wire cable rigged with a device to cut the mine's mooring cable. When cut, the mine bobs up to the surface and is then destroyed by gunfire.

With the influence type mines it's a somewhat different matter. To destroy or sweep influence type mines lying on the sea bottom, the sweeping ship must duplicate the particular influence or combination of influences which actuate them. Acoustic mines, for example, are swept by means of a large drum-like noise-producing object that is towed behind the sweeping vehicle. This noise maker—called a "hammer" or "butterfly"—makes a sound similar to that of a ship's propellor.

Magnetic mines are influenced or destroyed by means of a pair of electrically charged cables which the

MINE GOODNESS—Crew members of MSB prepare to 'stream gear' with pig rigged for contact mines during sweeping practice in Charleston harbor.



TRIM CRAFT—MinLant men man the rails of their coastal minesweepers (MSCs) nested together at Atlantic Fleet Mine Forces Headquarters.

sweeper tows through the water about the same as a fisherman trolls. These high-voltage cables have a loop at the end or a "J-type rig," with positive and negative electrodes which produce a magnetic field.

The U. S. Mine Forces, although not the world's largest, are second to none in spirit and determination. "We have many new type ships with rough, rugged, well trained crews who are not afraid of work," ComMinLant says. "The submarine sailors are known for their esprit de corps, but they will really have to go some to beat that of the personnel of our Mine Forces."

"I really don't know what gives my men all their drive," the MinLant boss added. "They don't get extra pay as they do in submarines or aviation. It's a great deal of hard work with little compensation other than knowing they are doing an important job and doing it well."

But despite the hard work, morale and reenlistment problems are at a minimum. Last year MinLant had the highest over-all reenlistment rate in the entire Atlantic Fleet.

DOUBLE CHECK—R. G. Siers, BM3, USN, and K. W. Webb, BMC, USN, check electrode of magnetic minesweeping cable on board *USS Bulwark* (MSO 425).

Although MinLant may not be as widely known as some of the other type commands, it is far from being a small outfit. It includes many ships of various types—of which more than half are coastal and ocean minesweepers. It has a rather large number of minesweeping boats.

The various ships and minesweeping boats within the Atlantic Fleet Mine Force are assigned to squadrons. One, MinRon Four, includes the new wooden-hulled, non-magnetic coastal minesweepers (MSOs) as well as the old type coastal minesweepers (MSC(O)s). The latter are the standard wooden-hulled minesweepers of World War II which originally carried a YMS designation but were later changed to AMS and then MSC(O). These ships are gradually becoming inactivated as the newer MSCs become fully operational.

In addition, the landing craft repair ship USS *Pandemus* (ARL 18) is assigned to MinRon Four. It's a converted LST which serves as a tender, support and command ship as well as the squadron flagship. Also assigned are net tenders primarily used for recovering practice mines.

MinRon Eight is the "big" division of MinLant, not because of the number of its ships, but because it is made up of the heavyweights of the Mine Force—the 165-foot wooden-hulled ocean minesweepers—the MSOs.

Assigned to MinRon Eight is ComMinLant's flagship, USS *Gwin* (DM 33). The squadron flagship is USS *Orleans Parish* (LST 1069) which also serves as a logistic support ship for the MSOs and a landing and repair facility for helicopters. The experimental metal-hulled Fleet minesweeper USS *Peregrine* (MSF 373) is also assigned to MinRon Eight.

Rounding out the family of minesweepers are the MSBs of MinRon 10. These minesweeping boats are the "Mighty Mites" of the Mine Force. They are called upon for the many intricate harbor and shallow-water sweeping operations. Only 57-feet long, they are manned by six or seven enlisted men, including a chief or first class boatswain's mate or quartermaster who acts as skipper.

The only officers assigned to the

entire squadron of MSBs are LT J. D. O'Shaughnessy, USN, who is the squadron commander as well as ComMinDiv 101, and LT C. D. Lilly, USN, who commands MinDiv 102. LT O'Shaughnessy is the youngest and lowest ranking squadron commander in MinLant (a job usually assigned to a four striper) and perhaps in the entire Navy.

All the ships in the Atlantic Fleet Mine Force are home-ported at Charleston.

Some are deployed by periodic rotation to fulfill continuing commitments to other commands. One group provides services to the U. S. Naval Mine Defense Laboratory at Panama City, Fla., in the development of mine warfare equipment and techniques.

A second group act as training ships for the U. S. Naval Schools for Mine Warfare at Yorktown, Va. It is in these vessels that the prospective minesweeping officers, MSB skippers, boatswain's mates and electrician's mates who will be assigned mine warfare duties, get their initial training.

Another group provides services to the various branches of the Operational Development Forces in Key West, Fla., on projects connected with the evaluation and development of new mines and minesweeping techniques.

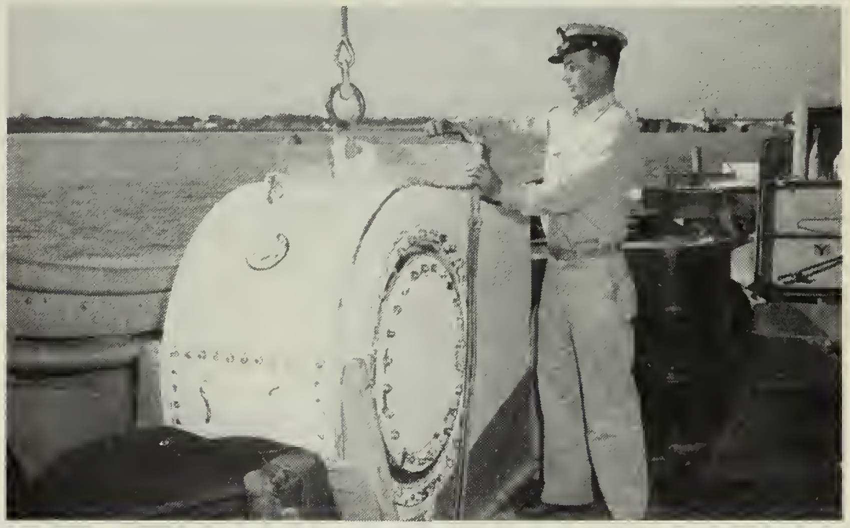
Other ships of MinLant rotate to the Mediterranean for duty with the Sixth Fleet.

During the Korean war, many of these same ships performed services beyond all expectations. Mine sweeping units of the Fleet suffered more than 32 per cent of the total U. S. naval casualties—yet sweeper crews comprised only two per cent of all Navy units serving in the Far East. The only combatant ships the U. S. Navy lost in Korean Waters were four minesweepers—and they were sunk by mines. Mines accounted for more than 70 per cent of all naval casualties during that war.

The ships of our mine forces may be small but they are looked up to by the biggest ships afloat. Even with guided missiles and nuclear power, Today's Navy of Tomorrow has a place for its "wooden ships and iron men." And that place is right out in front of the Fleet. Thats why the Mine Force can proudly claim, "Where the Fleet goes, we've been."

—H. George Baker, JOC USN.

'MINER' RELAXATION—MSB sailors enjoy off-duty hours in lounge of APL barracks ship. *Below: 'Hammer,'* noise maker for acoustic mines, is secured.



NESTING TIME—MSCs, *USS Falcon, USS Hummingbird* and *USS Shrike* moor alongside MinRon Four Flagship, *USS Pandemus* (ARL 18). YO 129 is outboard.

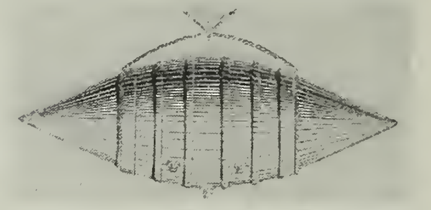
History of Navy Mine Warfare:

THE MAN IN THE FLEET, if asked, is just likely to tell you that mine warfare originated in World War I—but if he does say that, he "just ain't been reading the right comic books" for his next advancement exam. If his "shot in the dark" turns out to be the Civil War or the American Revolution, he's equally wrong, although they did play a part in mine warfare development.

Some authorities have concluded that the early Chinese were among the first users of naval mines since they were the first to discover and use gunpowder, but no concrete evidence of this has been found. So, perhaps as one authority states, "It is a matter of good manners rather than of technical accuracy to state that the first recorded use of mines was in 1585, when the Dutch succeeded in disposing of several hundred Spaniards at Antwerp by means of boats filled with gunpowder and exploded by clock-operated flintlocks."

Next came the "floating petard," a somewhat similar device used by the English in 1628, which might be considered a type of mine, although it did not explode under water either.

Comes the American Revolution (1775-81), and our old friend David Bushnell, of submarine *Turtle* fame, was involved in one of the earliest underwater mining attempts—by use of a submarine, naturally. In 1776, he fitted a submersible with an external charge of gunpowder in a waterproof case, this, in turn, being attached by line to a "corkscrew" which could be operated from within the underwater craft.



'Torpedo' Mine Was Bushnell's Idea

The idea was to sneak alongside an enemy vessel, maneuver the corkscrew into her wooden hull, then head for safer waters in the 30 minutes remaining before the mine charge was set off by a clockwork mechanism which caused a hammer to strike a percussion cap. This rig was used in several attempts against British warships, but all of them were unsuccessful.

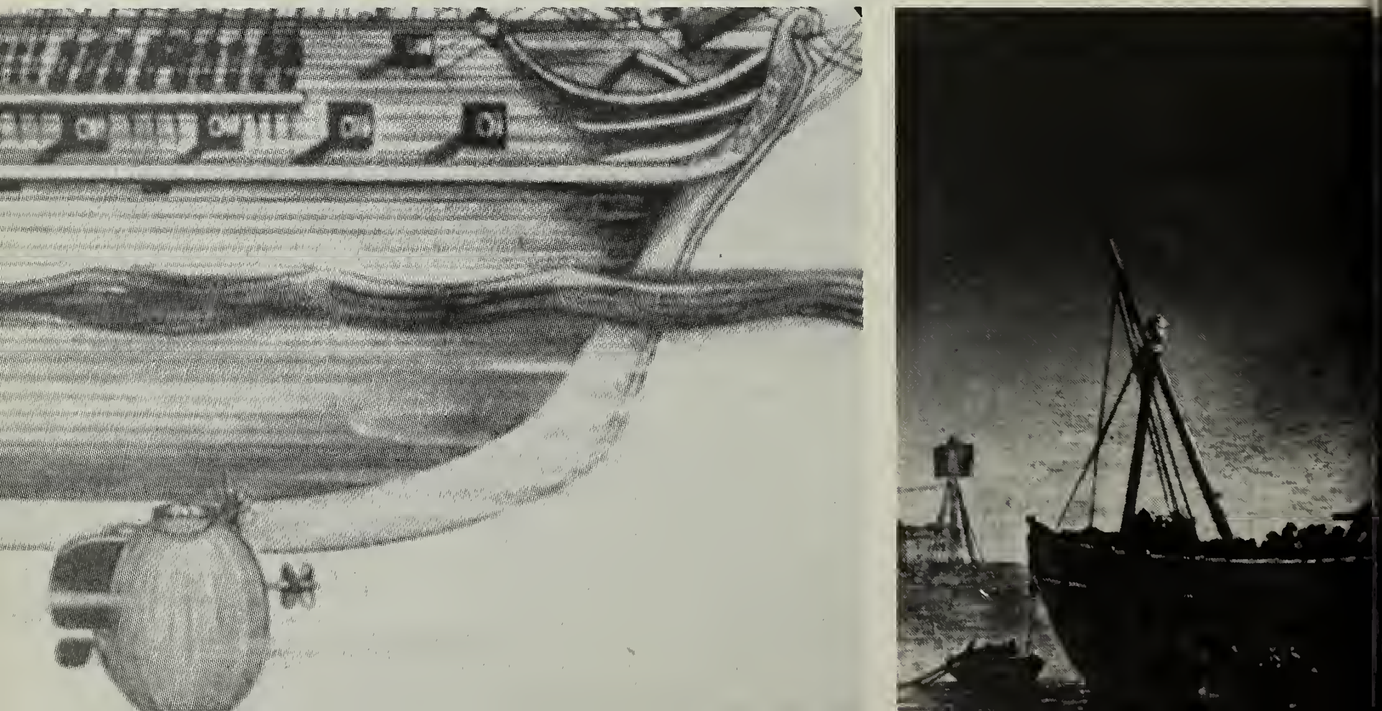
Bushnell also originated a couple of other ideas for mining ships, but they weren't very successful either. One of these resulted in the "Battle of the Kegs," an attempt to float loaded kegs down the Delaware river, trusting the kegs to come in contact with British ships anchored at Philadelphia, and eliminate at least a few of them. The kegs, each attached to a buoy which bobbed along on the surface, were designed to explode the moment they brushed against a vessel's bottom. Due to timetable upsets, however, the keg-bearing buoys came into view during daylight, thereby giving the enemy ample warning of their presence.

Several further attempts of a similar nature were made, creating little more than alarm.

Steamboater Robert Fulton also toyed with mines under French, then English, then American sponsorship. One device he tried for the French during their Revolution (1789-99) was more or less a crude locomotive torpedo which didn't turn out very well. Later he tried a submersible approach similar to Bushnell's, also without success. Yet another try with a submersible produced what has been called "the first recorded case of a vessel being destroyed in European waters by an explosive charge placed *below* the waterline." The time: 1801; the victim: an old schooner. The successful trial took place at a depth of 25 feet.

For the English in 1804 Fulton produced an oblong wooden craft, whose charge of 40 barrels of gunpowder was set off by an arrangement of clockwork, hammer and percussion cap. These rigs, connected in pairs, were used against a French fleet of Boulogne. But apparently

MINE WARFARE is hundreds of years old. In Revolution (left) Bushnell tried underwater mining with early 'sub.'



egs, Cabbages and Acoustics

Lady Luck agreed with the usual public opinion of the time, that any attempt to attack a water-borne enemy from beneath was morally indefensible.

Fulton conducted another experiment in 1805, successfully destroying a brig; then, tired of fighting British official and civil opposition, he returned to the United States. Between 1810 and his death in 1815, the inventor of the steamboat presented to American officials such ideas as the following:

- A "harpoon torpedo," making use of a musket to fire a harpoon which was attached by line to a torpedo and float. The idea: Once the harpoon was fired into the side of a ship, the tide could be counted on to bring the torpedo against the hull with enough force to actuate a spring lock firing mechanism.
- A moored contact mine consisting of 100 pounds of powder in a copper case, fitted with a lever which, when struck, fired a musket charge into the powder. The mine was made buoyant by adding a wooden box filled with cork. Also included was a most remarkable gadget which held the mine underwater for a time, then locked the firing lever and caused the mine to rise to the surface.
- A "turtle ship," designed to carry a crew of 12 and tow five torpedoes which could be actuated from inside the vessel. Painted dirty white, drawing only six feet and traveling with her arched topside barely awash, she was supposed to foul a victim with a torpedo, then set off the explosion by means of a line leading from the torpedo gunlock down through the scuttle on top of the craft. Although successful when first tried against a 200-tonner in New York, this unfortunate craft came to grief before making any headway against the enemy.

Robert Fulton Advocated Harpoon Mine

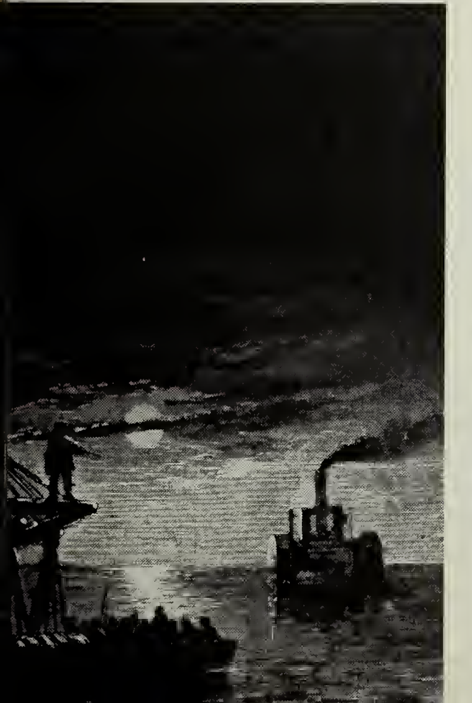
Controlled mining in the modern sense came into being in 1843, when Colonel Samuel Colt — the revolver man — succeeded in blowing up a ship which was underway approximately five miles from land. Colt, who had toyed for years with mines fired electrically from a post on the beach, achieved success by devising a method of determining the exact moment to fire a mine for effect: when a ship came in contact with one of Colt's mines, it closed an electrical circuit, signaling the shore-based observer which mine to fire.

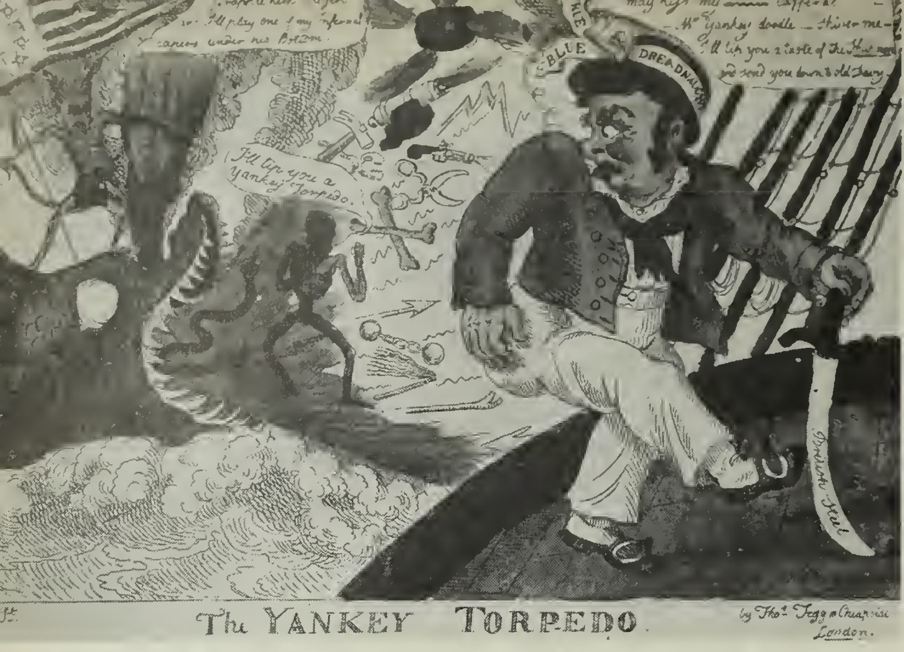
A few years later a similar mine set-up was employed in the defense of Kiel harbor during the Schleswig-Holstein emancipation fracas (1848-51). Although not particularly well planned, the very thought of this early defensive minefield kept the Danes from attempting to enter the port.

Russians, in the Crimean war (1854-56), used contact mines to protect such major ports as Sevastopol. The mines contained a 25-pound charge of powder, and had "horns" —lead finger-shaped fuses, each containing a quantity of glass-enclosed sulphuric acid surrounded by chlorate of potassium and sugar. Contact sufficient to bend the fuse and break the glass set off a chemical reaction which fired the main charge. Shore-controlled, electrically actuated ground mines were also used, but the Russians did not take advantage of Colt's method, and so had difficulty with their timing.

The Austrian armed forces partially overcame the timing problem in their 1859 war with France by using a *camera obscura* to project a ship's image onto a chart which was marked with the actual location of each mine in a field. An operator in his seaside control post could touch off a mine electrically while the shadowy ship image was directly over the mine's charted position. Haze, fog or darkness immobilized

LATER ON mines were more widely used. Moonlight minelaying in Civil War. *Right,* sweeping off Korea in 1953.




BLUE
DREADNAUGHT
I'll tip you a Yankey Torpedo.
The YANKEY TORPEDO.
by Thos. Tegg ... London.

IN WAR OF 1812 British may have ridiculed American mine warfare, but they still considered it devilish and deadly, according to this old cartoon.

the whole set-up, of course.

Colonel Colt's system could be used on a 24-hour basis, provided you didn't care whose ships were blown up. And the need for actual contact between mine and ship opened the possibility of damage to the mine system or to your own ship's hulls even when the mines were not exploded.

Mine warfare, or what passed for it, was fairly common during our own Civil War, and contributed a good bit to the development of the science, both in the types of mines and in methods of using them. Several different types of mines were used in the triple line of underwater booby traps which were part of Mobile's defenses, for instance. A water-tight keg, filled with powder, and fitted with coned ends and five finger-type chemical fuses was one type.

Another was an inverted cone, the lower half loaded with an explosive charge, the top supporting a weighted cast iron cover. A slight blow from a moving ship dislodged the cover, which was attached by a length of chain to a friction tube; the subsequent pull lit off the friction tube and that fired the charge.

Yet another type at Mobile (the "Brooks") was intended for use in shallow water. Made up of a water-tight gunpowder charge mounted on the upper end of a spar which was connected by means of a universal joint to a weighted "anchor," this mine was a hard one to sweep in its "natural" state. At times, however, sweeping was made even more difficult by an ingenious anti-sweeping device—a wire running from the first mine to a second "ground" mine which contained a much heavier charge. Any halfway successful attempt to move the first mine pulled the wire which set off the second mine.

Clever, them Rebels.

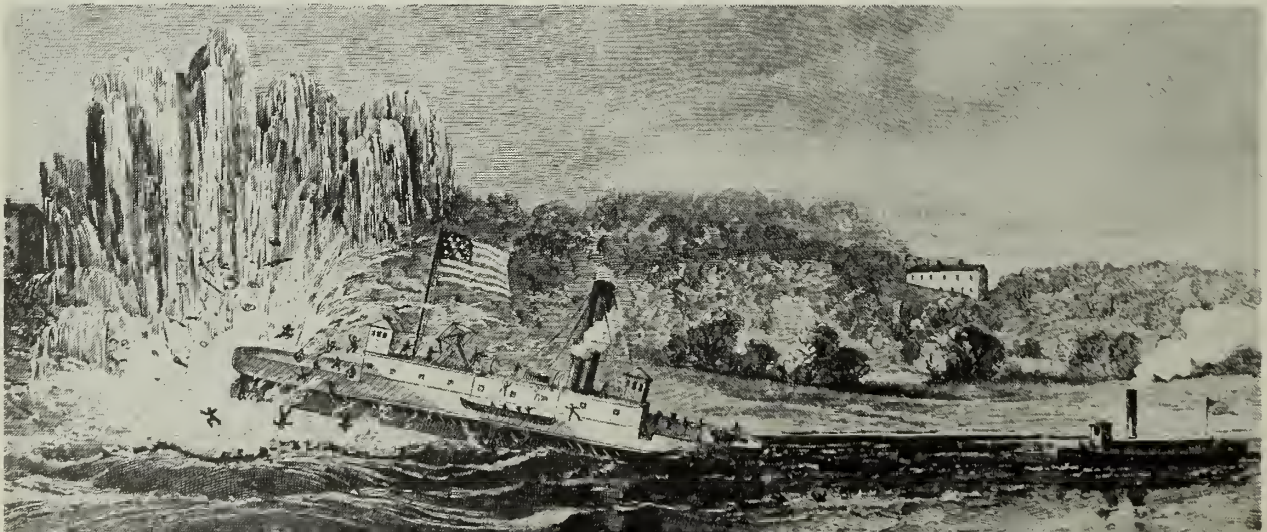
Shore-controlled ground mines, fired electrically, came into use during the later stages of the war. One "oddball" of this type: an old boiler stuffed with 1000 pounds of gunpowder and submerged in Virginia's Roanoke river. This little gem accounted for a heavily armored Federal gunboat, despite a careful Yankee search for telltale cable leading from the river bank into the water.

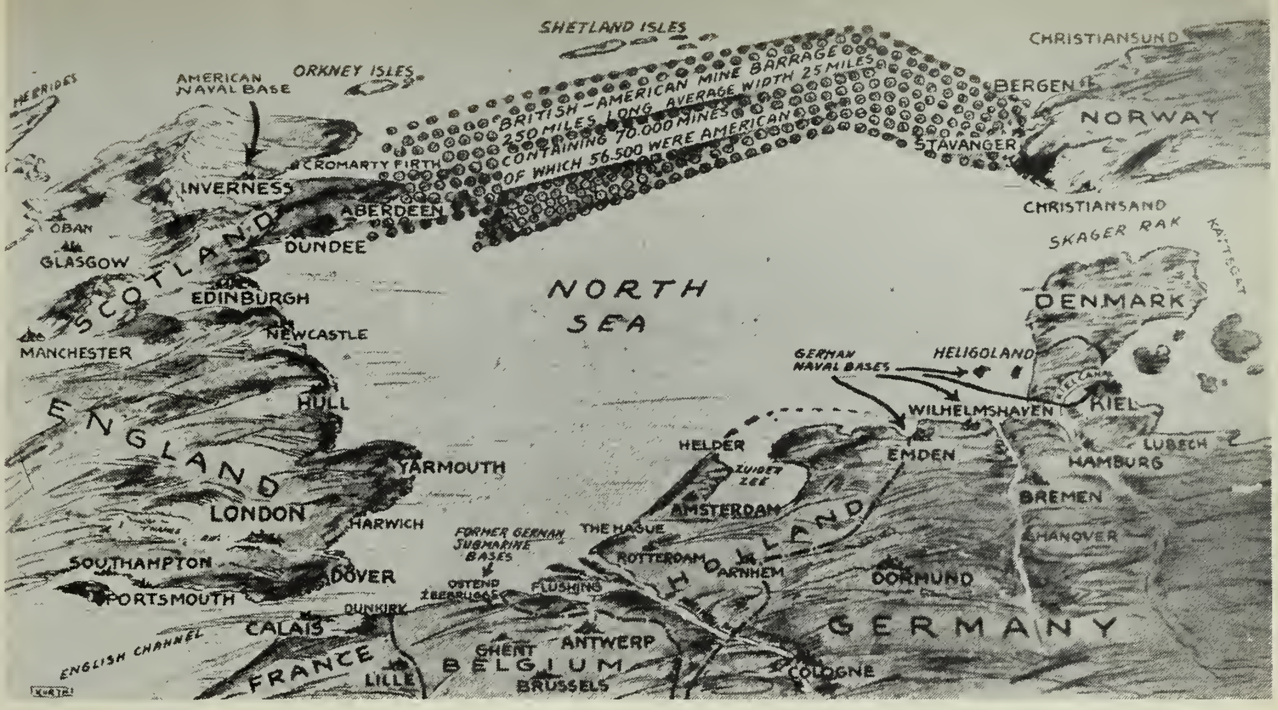
Also toward the end of the war, the Confederate *Davids* came into being, lugging their spar torpedoes with them. While neither mines nor submarines, in the modern sense, the *Davids* were similar to early attempts at mining—and they were pretty effective despite an affinity for fatal accidents. Their torpedoes (or mines) were copper-clad charges of gunpowder, fitted with contact chemical fuses. The *Davids* ran with their decks awash, much in the manner of Fulton's "turtle" minecraft.

All told, mine warfare is credited with destroying 22 combatant ships and damaging many others during the Civil War.

From 1865 to 1914, mine warfare developments in the United States were practically non-existent, although defensive mining of important harbors was maintained; other countries continued to develop mines and techniques, however. During this period guncotton was generally adopted as the explosive charge for

IN CIVIL WAR Confederates used a variety of mines. This one, despite size of explosion, killed only two Yankees.





IN WORLD WAR I U. S. and British laid mine barrage 250 miles long and 25 wide to bottle up German U-boats.

mines. The "Herz horn," a variation of the Crimean lead and glass fuse, was invented in 1868, and gained popularity as a fuse for independent mines, since each horn consisted of an independent battery which was not actuated until contact broke the sealed glass tube containing a bichromate electrolyte.

Britain developed a countermine system, which involved the laying and subsequent detonation of controlled mines in areas where enemy mines existed.

Various methods of defensive and offensive planting were also developed, a notable one being the use of open-sea mining during the Russo-Japanese War (1904).

By 1914 practically all maritime nations were in possession of at least a small amount of mine gear, and knowledge of mining potentialities for both offensive and defensive purposes. It soon became evident, however, that Germany was well ahead of other nations—at least in the beginning.

At the war's end, the tally sheet showed a different story: Germany had laid more than 43,000 mines, but Great Britain was credited with more than 128,000 and the United States had laid more than 56,000 in the North Sea Mine Barrage alone (See ALL HANDS, March 1953, page 59, and May 1956, page 59).

This spectacular mining operation, covering approximately 240 of the 250 miles between the coasts of Scotland and Norway, was designed to keep German U-boats in the North Sea. The only other outlet through which submarines could pass was the English Channel—already well patrolled. Although the North Sea barrage was proposed long before the U. S. entered the war, current British mines were not plentiful, and were not suitable for planting in waters which averaged 600 feet in depth. To be successful the barrier required mines at various depths throughout the 240-mile length—an estimated 400,000 mines in all, and an impossibility.

The U. S. Navy, however, soon after our entry into the war devised a replacement mine that solved both problems. To replace the older mines, which required actual contact between mine and victim, the Navy Bureau of Ordnance came up with one which could be planted at any depth, since it was set off by means of an "antenna" which reached to within a few feet of the surface. Thus, instead of planting mines at various depths in order to make a tight barrier, it was only necessary to plant them near the bottom. Any craft attempting to pass through the barrier regardless of its draft or depth would be likely to contact one of the antennas and blow itself to bits. These new mines cut the total number required for the barrage to approximately 100,000—just about one-fourth of the original figure.

Once the barrage was laid it was not completely effective, but it did account for a number of submarines and its effect on German morale was terrific. Ranging as it did from 12 to 35 miles in width, and requiring from one to six hours for passage, the barrage placed a terrible strain on the crews of submarines which did attempt to leave the North Sea via that route.

The mines used in the U. S. portion of the North Sea barrage were of the Mark VI type—which continued in use right on through post-WW II days, with modifications, of course.

During the period between the first and second world wars, Navy authorities paid little attention to mine warfare. Although a minute staff continued to develop mines and firing mechanisms, few of them were carried beyond the design stage. Mines of the three common types—drifting, moored and ground—were designed with mechanical, chemical, galvanic and magnetic firing devices, and a few of them were actually manufactured in small lots for use in testing and drills. An acoustic firing mechanism was also conceived, but not developed.

According to the *History of the Bureau of Ordnance during World War II*, mine warfare remained in this dormant state until September 1939 when German magnetic types

'AS YE SOW, so shall ye sweep.' Mines planted by Navy in World War I left monumental cleanup afterward, but ships like this got it done.

were planted in British shipping lanes, causing alarmingly high losses before countermeasures were perfected.

"Between September 1939 and 1942, the 20,000 German ground mines laid in the harbors and channels of the United Kingdom took a toll of over a million tons of Allied shipping. German mines also were used effectively in American waters; ships were sunk and several harbors were closed for short periods.

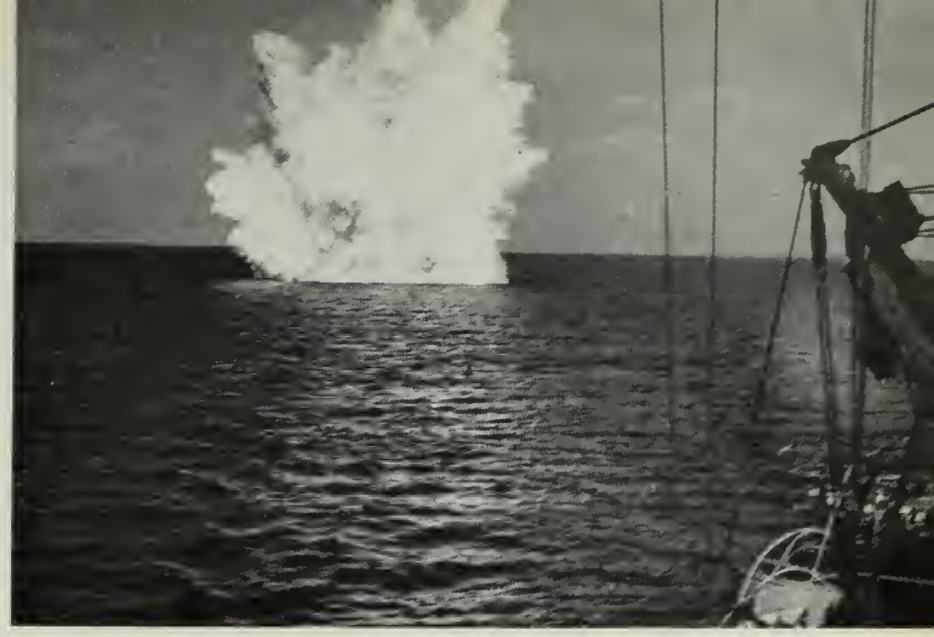
"On the other hand, British mines during World War II sank approximately 1050 Axis warships and merchantmen, and the American offensive mining campaign in Japanese home waters, initiated in the spring of 1945, virtually strangled the domestic and military economy of the islands."

When German use of a highly effective magnetic mine began to make headlines in 1939, our Navy had plenty of mines of WW I vintage which could be modernized, and the paper results of much basic research; otherwise 7 Dec 1941 found us with plenty of nothing—and not the least bit happy about the situation. The mines on hand included thousands of modernized Mark VI mines, originally designed for anti-submarine operations; limited quantities of Mark V (a drifter) and Mark VII (a moored, chemical horn rig); Marks X and XI, of the moored contact type, were available for submarine laying—but only uss *Argonaut* (APS 1) was equipped to handle them. Mark XIIs, a revised version of the German 1920-vintage magnetic mine, were in existence for both aircraft and surface minelaying, but most of those already manufactured were in Manila and had to be dumped in deep water to prevent capture.

A couple of random quotes from BuOrd's history reflect a change in the picture, however: "The advent of war soon quickened the interest of operational groups in this form of warfare; by the summer of 1942 there was a real demand for the development of new offensive mines." "American naval mines soon underwent radical change, emerging as potent, versatile, and decidedly offensive instruments of warfare, with little resemblance to their predecessors in either appearance or operational principles." By the end of the war the Bureau had "assigned mark and modification numbers to 65 mine designs, 39 of which were released for service use. Production emphasis, however, was confined in the main to seven mines."

The Navy's minelaying program in the Pacific is credited with sinking or damaging tonnage amounting to nearly one-fourth of Japan's pre-WW II merchant marine—some 2,000,000 tons, including two battleships, two escort carriers, eight cruisers, 46 destroyer types, seven submarines and 81 other naval craft. The mines which accomplished this feat included 21,389 aircraft-type mines, and 25,000 planted by surface craft and submarines. This mine campaign ran in two phases, an "outer zone" period beginning in October 1942 and running until the end of the war,

IN KOREAN conflict MinPac sweepers saved ships and lives. Left, LCVP on sweeping job. Right, 'pig' comes aboard.



WORLD WAR II kept the minemen mighty busy. Here *USS Chickadee* (MSF 59) detonates a German moored magnetic mine north of Cap Corse, Corsica.

and an "inner zone" phase which covered approximately the last five months of hostilities.

In the first phase, the mining of enemy-held harbors and shipping lanes effectively fouled up shipments of raw materials to the homeland, while cutting down on outgoing troop supplies. Representing one of the most concentrated mining offensives in history, the "inner zone" mining of Japan's home waters was carried out by the Army's Tinian-based B-29s using naval aerial mines. Among the mines used in this operation were two magnetic types, which had been previously used in the outer zone, and:

- An audio-frequency acoustic variety, fired by the sounds of a passing ship—but the Japanese accidentally discovered that noisemakers used in the training of their sonar operators were effective in sweeping these.
- A subsonic "unsweepable" mine, actuated by ship sounds too low for the human ear.
- Another "unsweepable," a type of pressure mine.

These basic types were varied by a Mine Modification Unit, being tailored to fit the desired target and situation. The twin goals of this unit: defeat known enemy sweeping methods; and change firing characteristics so that only larger ships would actuate the mines.

The unit's work has been credited with doubling the tonnage sunk.

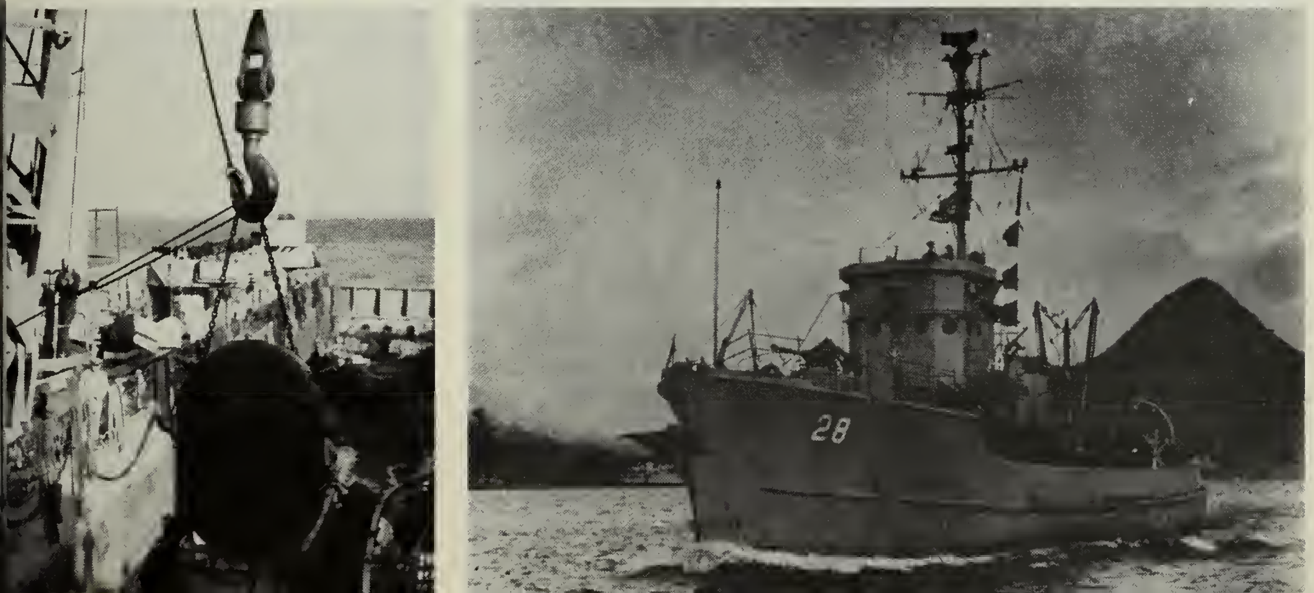
From 1945 until the outbreak of fighting in Korea, the Navy's mine force personnel were kept busy sweeping up the mess left by World War II, and in training and maintenance tasks. Simultaneously, the men responsible for developing new mines and techniques—the men who were assigned the job of insuring that our mine warfare organization remained "in the van" of the new Navy—moved steadily along their secret research trails, producing, testing and storing for possible future use a whole bag full of new tricks.

Korea, to the UN mine forces involved, was primarily a matter of spotting and sweeping. The mines, although of Russian manufacture, were conventional types common to both sides during World War II: moored, floating and ground mines, with contact, magnetic, pressure or acoustic detonating devices—or possibly a combination of these. Mine spotting was successfully carried out by helicopters; but an aerial countermining attempt, using planes and bombs, was not so successful.

Today, the men who man our minecraft spend a good part of their time in the familiar drills, study and constant maintenance routine needed to keep a mine organization and its equipment in topnotch order. Some of the stuff they work with is classified, but much of it is straight out of World War II. Meanwhile, back at headquarters the "masterminds" are steaming ahead, dropping in their wake figurative "Dan buoys" to mark the cleared channel into an age of nucleonic navies—and untold possibilities for mine warfare.

—Barney Baugh, JO1, USN.

RUSSIAN-BUILT mines were used by foe in Korea. *USS Osprey* (rt), MinPac sweeper, was hit three times by Red fire.



Mineman's Alma Mater

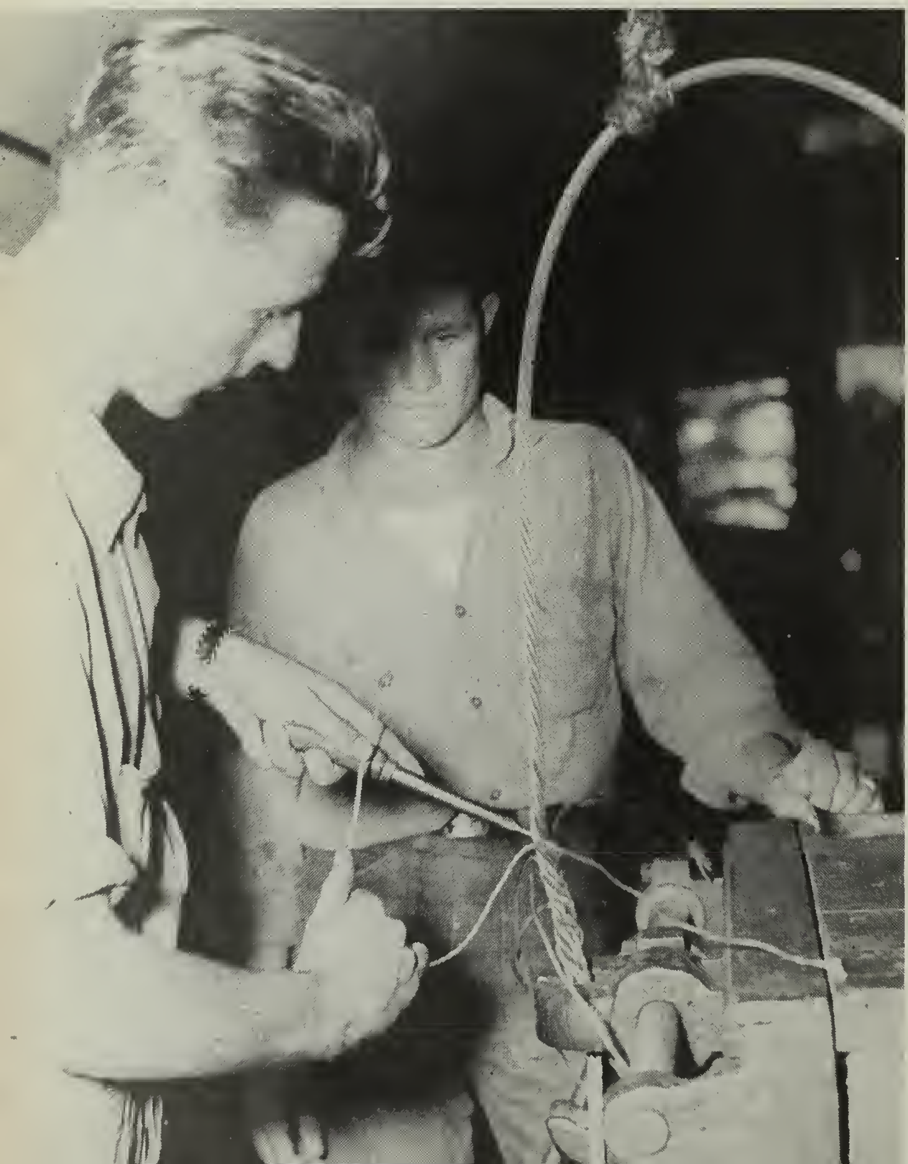
Almost everyone has heard of Yorktown, Va. In grade school history, we learned it was where Lord Cornwallis surrendered the British Army to end the American Revolutionary War. There's a big national shrine there, visited every year by hundreds of tourists. Yorktown played a big role in early American history.

Another important role is performed in that area today. It is the work of the Naval Schools, Mine Warfare—the only school of its kind in the United States and one of the least publicized schools in the Navy.

On the 209-acre tract of land which adjoins the Yorktown Battlefield Park, the Naval Schools, Mine Warfare, trains officers and enlisted men in all phases of offensive and defensive mine warfare. During 1956 alone, the Schools graduated 339 officers and 834 enlisted men who had completed one of the 24 courses offered at Yorktown. Their studies ranged from the basic course in the Class A Mineman School to the course in Minesweeping and Minelaying.

In addition to the men from the U. S. Navy and a few from the U. S. Air Force, selected officers and enlisted men from friendly navies of the free world are also students at Yorktown. A number of selected U. S. Navy-employed civilians also attend courses here every year.

PROFICIENCY with hand tools is a mineman 'must.' Here, Yorktown instructor demonstrates art of wire splicing to student at the Navy's mine warfare school.



The courses of instruction at Yorktown range from the 20-week Mine Warfare Staff Officers' course and the 13-week Mines Maintenance Officers' course to the Classes A and B Mineman courses to the six-week Minesweeping Boatswain's Mates' Class C course.

The Mine Warfare Schools in Yorktown were commissioned on 31 Dec 1940 and the first class convened a week later with a student body of 50 officers and 175 enlisted men. During the following 16 years of operation, the school has trained more than 20,000 officers and enlisted men in all the intricacies of mine warfare.

One of the most important aspects of the Yorktown curriculum is practical experience. Each of the students is taught by doing. A good example of the training offered at Yorktown is the Class A Mineman School.

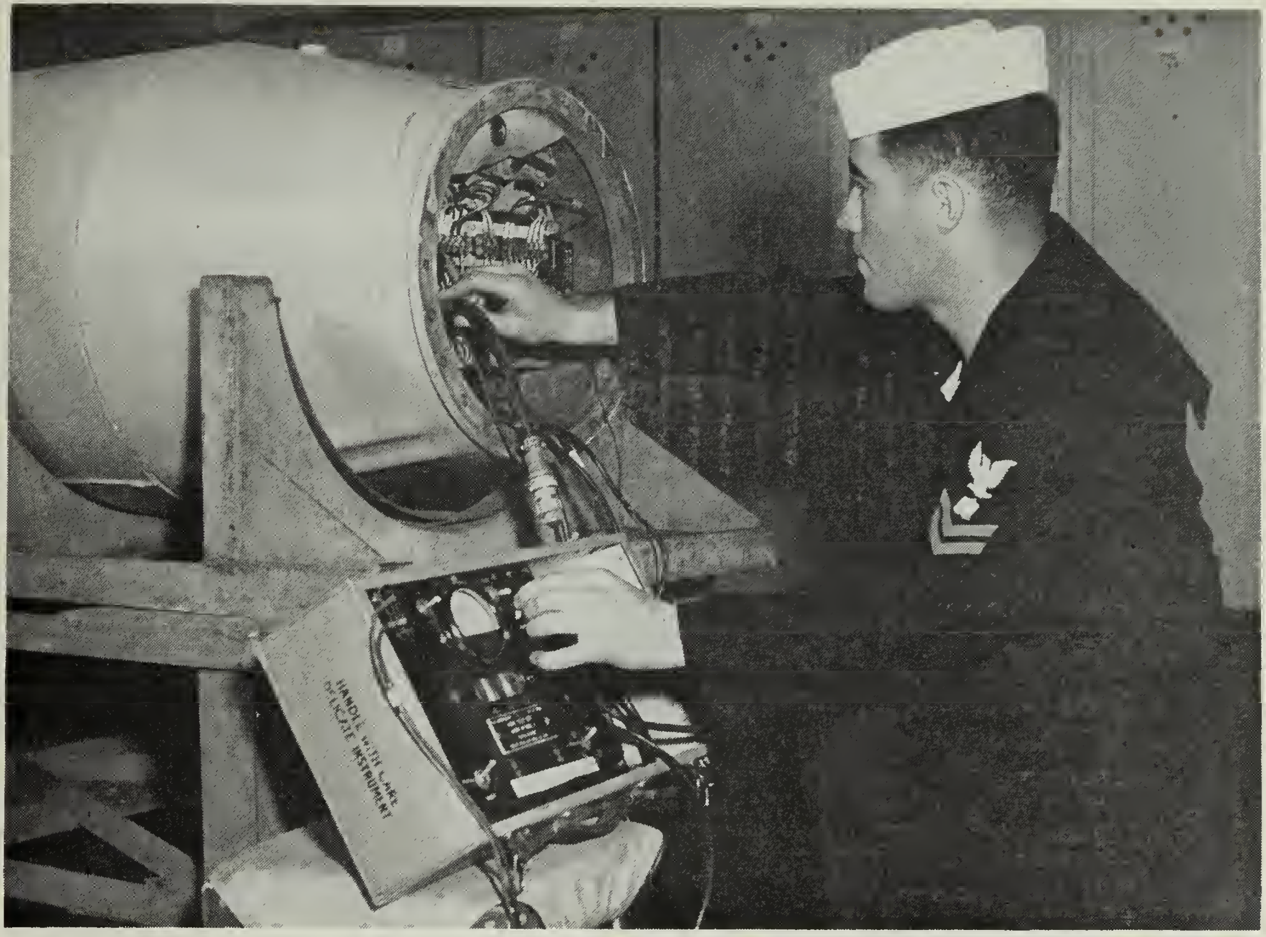
The embryo Mineman attending the 14-week school is given first a course in basic electricity and mine accessories. Mines used in today's Navy are highly complicated items of machinery and electronic circuits.

The advanced student must learn as much as he can in the few weeks of basic electronics since his work will revolve around this medium. In addition, he must be able to read blueprints, drawings, and schematics—which are in a language all their own—and must be adept in the use of the various types of hand tools.

As one veteran Mineman put it, "You've got to have the nerves of a tightrope walker, the delicate touch of a sculptor, and the training and ingenuity of a scientist-inventor."

Besides the training in basic electricity and electronics, the student in the "A" school learns about power supplies, amplifiers, fundamentals of mine warfare, special circuits and other devices, mine vehicular equipment, mine equipment catalogs and mine operation procedures.

Under the subject of "mine vehicular equipment," the student is taught the features, functions, and operations of the basic types of all mines. Except for specialized features for specific jobs, most mines fall into two or three basic categories. Once the Mineman has these down pat, he can easily learn "special features" of other particular-mission weapons.



MINEMAN'S TOUCH — Learning how to check and adjust equipment calls for know-how and delicate handling.

In effect, this mine "vehicular" equipment takes a trainee from a knowledge of fundamentals up the road toward the ability to work with any mine equipment of the same general type. The student gains experience by actually seeing the mines operate, maintaining them and solving practical troubleshooting problems on them. This work is invaluable since these vehicular mines are either so typical, or contain so many of the circuits and features of all the others, that the Minemen can work with any mines of the same general type in only a short time.

When the Mineman reaches the Fleet, he will deal in several distinct types of mine duty, depending upon whether he's assigned to a surface minelayer, a submarine minelayer, a shore base for test and assembly, or a tender of an aviation activity. The routine procedures of his job will vary with his assignment. In any case, the Mineman trainee is given some preparation in basic procedures which makes it easy for him to adapt himself to the special requirements of any branch of the Mineman service.

Instruction in this category is presented to the Mineman at school in "operational procedures" and includes such fundamental routines as:

- Handling and stowing underwater equipment.
- Testing of mine components and assembly of mines.
- Overhaul, test and adjustment of depth charges and preparation for firing.
- Supervision of storage and preservation of stores and spare parts.
- Operation, construction and routine maintenance and inspection of mines, mine-handling gear and controlled devices.
- Safety precautions related to explosives, magazines, mines and mechanisms.

Another subject in the course which stays with the Mineman throughout his career is "Equipment Catalogs." These catalogs list and describe all types of underwater ordnance, particularly with respect to their electrical and electronic components. Ability to read these catalogs helps the Mineman to extend his knowledge beyond what he has actually learned in the other subjects. The devices and equipment listed are described in terms of the "vehicular equipment" which he has already studied. Thus, if the Mineman is required to handle a mine or depth charge which has electrical or electronic characteristics he hasn't seen before, he can look up the part in the reference catalog and get a good description of it.

The Mineman trainee also gets thorough training in the use of the various types of hand tools. Since he will use many of these tools in assembling and servicing the mines, he must have "the touch of a sculptor" when, for example, he buttons up a mine case—closing and sealing all openings — before planting. A little awkwardness or possibly too much pressure on tightening a nut could cause the mine case to crack. On the other hand, too little pressure might keep the mine from being watertight and turn it into a dud.

ALUMNI — Mine schools have trained more than 20,000 Navymen. Those above with practice mines and below with pig are serving with MinPac.

The fourteen-week Class A Mineman course covers the practical work an MN would be required to perform regardless of the type of duty he will eventually be assigned. Basically, there are three major types of duty he might get.

First, on shore, he may work in mine assembly, which includes loading the mine with a charge of high explosive and then installing various mechanisms which "arm and fire" the mine, once it gets into the water. This is like loading and beginning to fire this strange weapon while still hundreds of miles away from the prospective victim.

Second, afloat, the MN might get duty in a minelayer, where he completes the process by actually launching various types of mines.

Finally, and equally important, various types of craft equipped for minesweeping have the job of clearing the waters of enemy mines for the protection of our own ships. Although Minemen are not normally assigned to this type of duty, they must know something about it.

Perhaps the most characteristic action for the Mineman consists of minelaying. But in dealing with mines every action must take place

TRAINED in Minesweeping Boatswain's Mates course at Yorktown, many BMs go on to become skippers of MSBs like these nested together in harbor.

in a very precise sequence and it is hard to regard any one portion—even the minelaying operation—as separate from the whole process. For instance, "firing" this weapon really begins on shore, since it is loaded with a huge charge of high explosive, in the earliest stage of its assembly. On the other hand, unlike any piece of machinery which is normally completely assembled in a factory, "assembling" has to be finished aboard ship. Actually, the mineman makes his final adjustments at the very last minute before the releasing gear drops the mine over the side.

These last minute adjustments by the MN are a part of "minelaying." And though they are performed almost with split-second timing, they demand great skill and, above all, utmost accuracy. These last-minute operations include activating certain mechanisms, previously installed but left in non-service condition, now set so that once the mine is in the water, they will become self-operating and will "arm" and eventually fire the mine. Also, various safety devices which have kept the mine in its non-service or safe condition, must be removed so that the firing mechanisms can operate as designed.

Finally, the releasing gear is operated and the "sea monster" takes up its position in the water, there to lurk silently until the enemy ship approaches and meets its fate. Often, this kind of minelaying action takes place at night, under uncommonly difficult conditions.

This basic training is thoroughly ground into the embryo Mineman at Yorktown. In brief, when the Mineman completes Class A school he:

- Knows the operating procedures for all types of mines and depth charges and associated equipment.
- Can maintain, test, adjust and troubleshoot mines.
- Conducts periodic cleaning, lubrication and performance testing.
- Can use all mechanical and electrical instruments and tools associated with the work he's doing.
- Reads and uses mechanical drawings, blueprints, schematics and wiring layout diagrams.
- Can locate troubles and make minor repairs.
- Knows the proper methods for handling and stowing.
- Can install equipment and accessories.
- Maintains mine warfare records.

It sounds tough, but mine warfare is a mighty tricky business.

Very rarely will the Mineman see the results of his work—and it's quite unlikely that you and I will hear of the results of his work until long after the battle. Unlike combat in the ordinary sense, by the time the "kill" is made the Minemen are far off, engaged in other duties. They seem to share little of the glory. But like their predecessors in the Battle of Yorktown during the American Revolutionary War, they too are playing a big part in forming the destinies of the United States.

—Rudy C. Garcia, JOC, USN.

Courses for EMs at Naval Schools, Mine Warfare

Ten of the 24 Naval Schools, Mine Warfare, at Yorktown, Va., are open to enlisted men in certain ratings. Here's a rundown on the schools available to EMs and what rates are eligible:

- ***Mineman,*** Class "A"—A 14-week course which trains the student in the fundamentals of mine assembly testing and maintenance, storage, and mine warfare. Open to SA, SN, and MN3.
- ***Mineman,*** Class "B" —A 13-week course of advanced instruction for MN2 rating and above in maintenance of all mines and mine mechanisms in service use.
- ***Aviation Mine Assembly,*** Class "C"—Four weeks of training for AO2 and above in the test, adjustment and assembly of all aircraft-laid mines.
- ***Submarine Mine Assembly,*** Class "C"—A six-week course for GM3, MN3, and TM3 and above in the test, adjustment and assembly of submarine-laid mines.
- ***Minesweeping Boatswain's Mates,*** Class "C"—This six-week course gives the student an understanding of minesweeping gear and is open to BM3 and above and also to designated BM strikers.
- ***Minesweeping Electrician's Mate,*** Class "C"—This course, open to EM3 and above and also to designated EM strikers who are graduates of the EM "A" School, provides the student with a knowledge of influence minesweeping (electrical components) and teaches him to operate, adjust, repair and maintain electrical equipment aboard a minesweeper.
- ***Minesweeping Automatic Degaussing,*** Class "C"—Rates eligible for this five-week course are EM3 and above and designated EM strikers who are graduates of Minesweeping EM, Class "C" course. This course teaches the student to operate, maintain and repair the automatic degaussing equipment aboard minesweepers.
- ***Submarine Automatic Degaussing,*** Class "C"—A four-week course for EM3 (SS) and above, which teaches the EMs to repair, operate and maintain automatic degaussing gear aboard submarines.
- ***Electrician's Mates, Ranging and Deperming,*** Class "C"—This course is open to EM2 and above. The seven-week course gives the students an understanding of the purpose and principles of degaussing and deperming and also qualifies him for duty at degaussing and/or deperming activities.
- ***Mine Assembly Refresher***—Officer and Enlisted — This three-week course is for officers and enlisted men who are qualified firing mechanism technicians to requalify them in testing, adjusting, assembling and repairing firing mechanisms on all service mines.

Quotas for these schools may be obtained from Service Force Commanders by Fleet activities and from the Bureau for shore activities. The convening dates and other information on these schools is contained in BuPers Inst. 1500.25A.

USNR Lends a Hand—

Port Protectors

In a massive underground structure located on a sloping hill overlooking one of our important harbors, a group of Naval Reservists cluster about a maze of electronics gear in a crowded cubicle.

Seconds ago an alarm had sounded. Miles out at sea, an unidentified "iron body" had passed over a magnetic indicator loop. The loop, a wire cable laid on the bottom of the ocean, records any distortion of the earth's magnetic field by the crossing of an iron body over it. The effect on the magnetic field was recorded on chart paper and the record mechanism in this tightly guarded underground post sounded an alarm.

Instantly underwater listening devices and echo-ranging equipment begin their tasks of providing accurate, precise tracking information. Hydrophones are used to detect the sound generated by a ship's propulsion machinery and transmit the resultant electrical impulses to the station by means of a submarine cable. Sono-radio buoys do the same—but send the underwater sounds ashore by means of radio instead of through a cable.

The herald—a supersonic echo-ranging and listening device capable of transmitting a short, powerful signal and then receiving the reflected echo from an underwater target in such a manner that its distance and bearing are known—is the "last line of detection" in this complex system designed to protect our harbors from possible enemy sneak attacks.

As fast as the information is received from these sources, it is "fed" to the officers and men of the Harbor Entrance Control Post (HECP) who carefully evaluate and coordinate the data.

Finally, a determination is made as to whether attacking surface and aircraft should be sent out for the "kill."

In this instance, no orders to attack are necessary. The "iron body" is quickly identified as a Navy destroyer coming back from a training cruise.

The Reservists taking part in this exercise are members of a Naval Reserve Harbor Defense Division, training alongside Regular Navymen at a Harbor Entrance Control Post.

The functions of the Harbor De-

RESERVISTS receive special training courses in Harbor Defense School at Treasure Island, Calif., and Harbor Defense unit at Norfolk, Virginia.

fense Unit, whose headquarters is in the HECP, are to:

- Challenge all ships approaching the harbor entrance and to prevent the entry of any unidentified ship on the assumption that it may be an enemy.
- Control the movement of ships in the harbor entrance in the interests of mutual safety.
- Receive information from naval control of shipping office, harbor detection stations, and surface radar and to pass to patrol ships and aircraft all pertinent information on targets.
- Arm defensive minefields, maintain nets and booms, and close or open net gates.
- Order appropriate action of hunter-killer teams, and recommend Fleet action in the preservation of a secure harbor.

Harbors must be defended against surprise attacks by sea—via submarines—and by air. They must also be guarded against fast small craft, such as PT boats, sneak craft, swimmers, demolition teams and offensive mines.

There are seven major lines of detection currently used to thwart any kind of sneak attack. They are:

Air radar and *surface radar*—conducting long range searches from a shore base.

Air patrol—covering the outlying approaches to a harbor.

Offshore patrol—usually conducted by DEs equipped with radar and sonar, and *inshore patrol*—conducted by PC type ships.

Magnetic indicator loops.

Hydrophones and sono-radio buoys.

Echo-ranging heralds.

Because the duties of harbor defense in a future emergency would be assigned, to a large extent, to Reservists, the Naval Reserve Harbor Defense Program was established almost a decade ago.

At the present time, there are 22 divisions—all pay units—operating in the Harbor Defense Program. Membership is open to both officer and enlisted personnel—including those who do not qualify for sea duty.

While experience in harbor defense components or related experience and training is desirable, the training program has been developed to the extent that inexperienced Reservists may also take part.

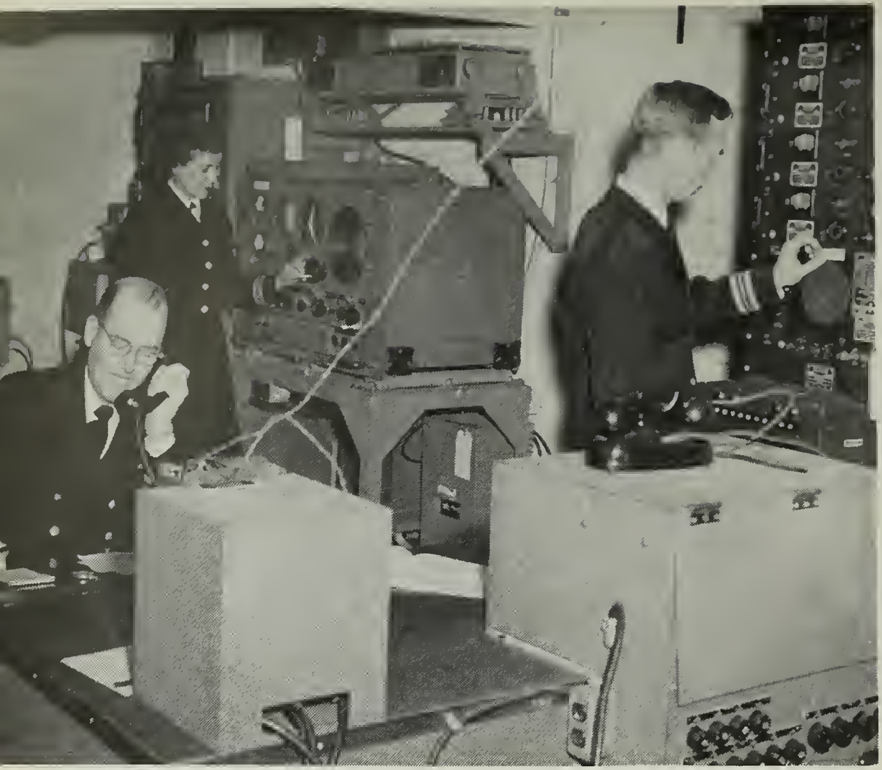
CARE AND OPERATION of harbor nets is part of training of USNR Harbor Defense (TUN) units. *Above:* Wartime netlayer. *Below:* Floats are painted.

Reservists in many enlisted ratings are eligible to join Harbor Defense divisions:

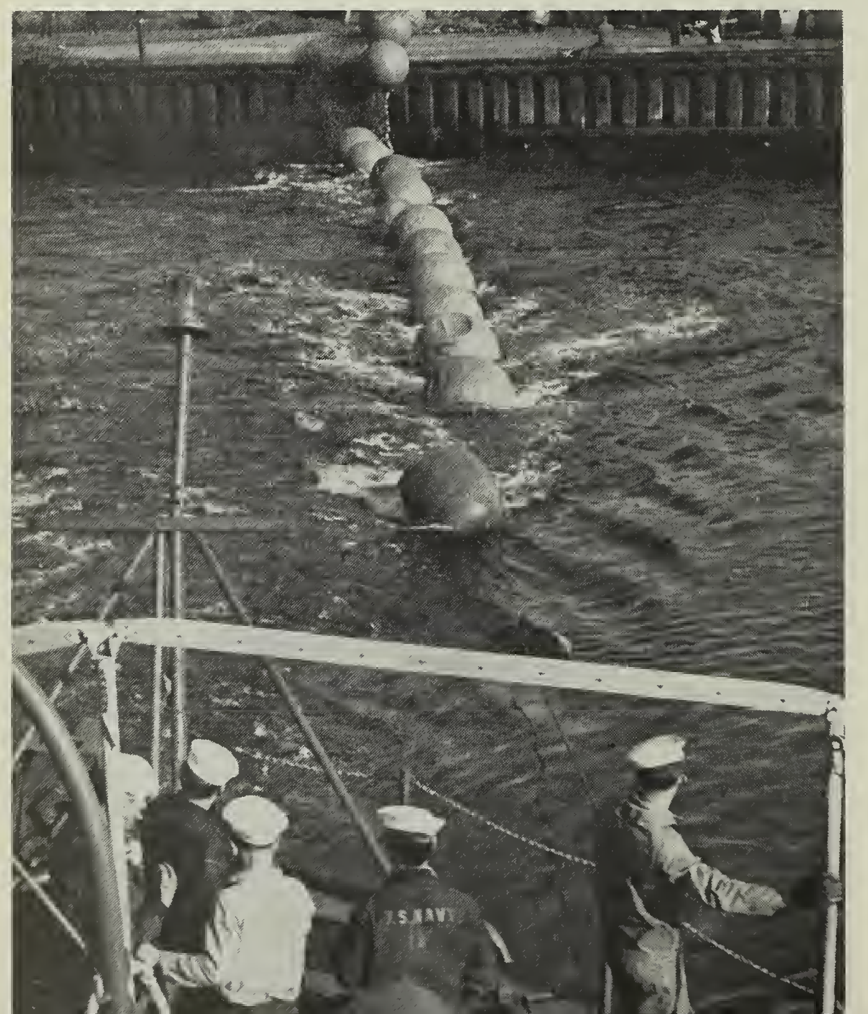
Boatswain's mates, gunner's mates, quartermasters, radiomen, radarmen, sonarmen, minemen, electronics technicians, telemen, electrician's mates, enginemen, damage controlmen, metalsmiths, interior communications electricians, machinist's mates, torpedomen, yeomen and storekeepers.

Membership is not limited to male Reservists. Waves, both officer and enlisted, may enroll in Harbor Defense divisions. Applications are made to district commandants.

The Harbor Defense Program is made up of both operational divi-



OPERATIONAL DIVISIONS of this Reserve program provide operational and tactical training (above.) Below: Netlayer crew pulls net into water.



sions and technical divisions. Because it is not practical for each division to offer training in all fields of harbor defense, the following missions have been established for the various divisions:

Operational divisions (OP) have been organized for the purpose of providing training in all operational and tactical functions of harbor defense.

Because of the nature of their activities, these divisions may utilize over-age personnel, limited service personnel, and personnel not physically qualified for sea duty.

Technical divisions have been established to provide technical training in specific harbor defense equipment. There are two types of technical divsions:

- *Technical Division, Underwater* (TUN)—provides training in the installation, operation and maintenance of underwater detection equipment and in the fabrication, installation and maintenance of nets and booms.
- *Technical Division, Mines* (TM)—provides training in the assembly, installation, operation and maintenance of controlled mines and training in mine countermeasures, including channel clearance, mine location and destruction techniques. These divisions are located at or near harbors that include mines as part of their defense system.

Reservists selected for enrollment in technical divisions should be qualified to perform duty afloat in connection with installing and maintaining sea units of the harbor defense equipment.

There are 11 OP divsions, 7 TUN divisions and 4 TM units currently in operation. Their locations range from Portsmouth, N. H., to Miami, Fla., and from Port Townsend, Wash., to San Diego, Calif. In addition, there is an OP division at Balboa, C. Z.

The training Reservists receive as members of Harbor Defense divisions is often as exciting as it is thorough.

For example, the operator of an echo-ranging herald sea unit has to be able to identify the various types of target contacts. He soon gets to know the sounds caused by fish, the ocean floor, rocks, ships and submarines — distinguishing them by the distinctive echo each gives over a crystal-type sea unit.

HARBOR ENTRANCE Control Posts evaluate info from detection gear, calling for the 'kill' if necessary.

He must understand the "Doppler effect" — the apparent change in pitch of a sound wave, and how to distinguish a moving target from a stationary one. He must know how to determine a target's course beneath the surface.

And he must have the know-how to adjust and maintain equipment to give maximum results under varying sea conditions.

In order to get the best possible training, Reservists in the Harbor Defense Program attend a minimum of 48 drills annually and spend 14 days on active duty for training (AcDuTra).

Drills are conducted at the nearest Fleet Harbor Defense Unit so that Reservists may receive actual on-the-job training in their specialties. Each Fleet Harbor Defense Unit has a billet for a "Readiness and Training Officer."

This officer, in addition to his duties with the Regular unit, acts as an instructor for Reserve divisions during drill periods.

Reservists operate the same gear they would be using upon mobilization. As an example, certain Regular units have mock setups of mine control systems for use by members of TM divisions.

In addition to weekly drills, multiple drills are conducted over weekends, with exercises in the division's specialty.

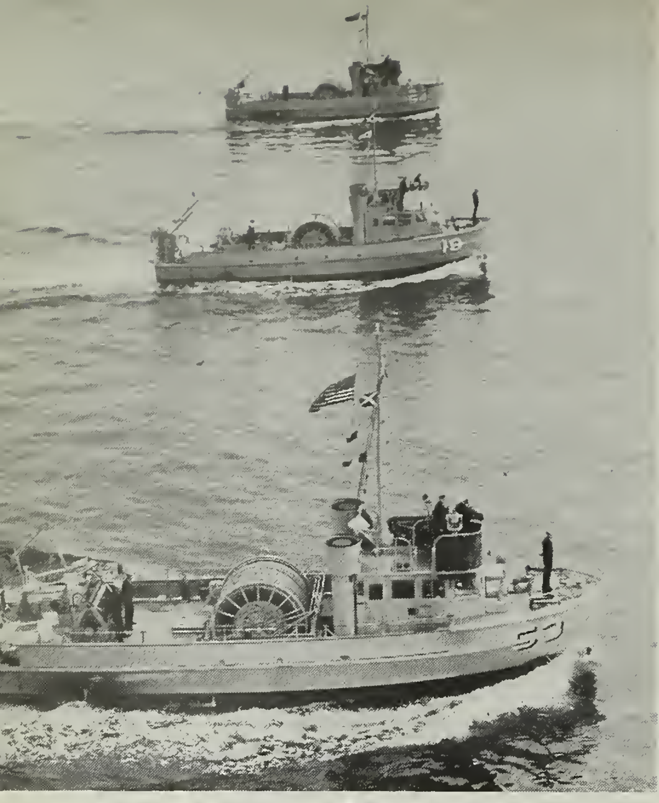
Mine units, for example, get practical experience in minelaying and recovery operations.

Quarterly harbor defense exercises are also held, with Reserve divisions taking part. In these exercises, submarines, frigates, Coast Guard ships, patrol craft and miscellaneous small craft all cooperate to create realistic problems for the Harbor Defense Units to solve. Reservists are assigned to key positions in the combat centers and also take an operational part in the activities of the afloat units.

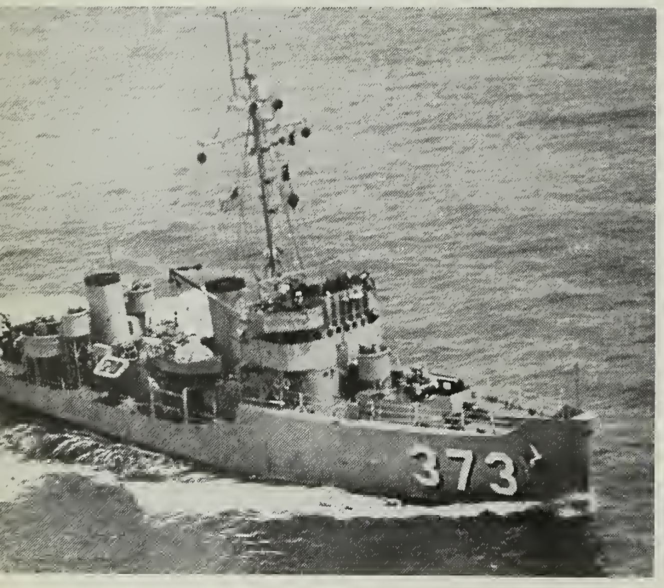
Specialty training is also available to Reservists at naval schools providing instruction in sonar, mine warfare, nets and booms, CIC, radiological defense, damage control, chemical warfare, radar and radio, all part of harbor expense.

So the next time your ship heads into port, remember that a small army of mechanical eyes and electronic ears are likely to be "watching" your progress. And behind these inanimate detection devices there are many Navymen—Regulars and Reservists—on the job around the clock to see that any possible sneak attack meets with failure.

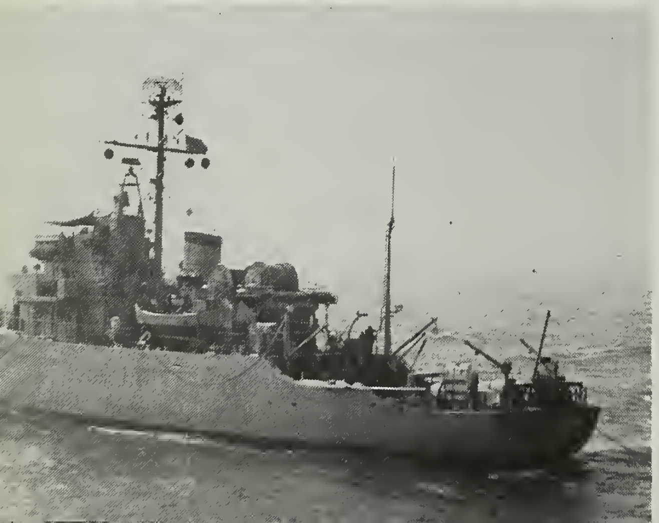
RESERVE HARBOR Defense units get plenty of practice working with Regular Navy on exercises like mine-laying project of Treasure Island HD school.

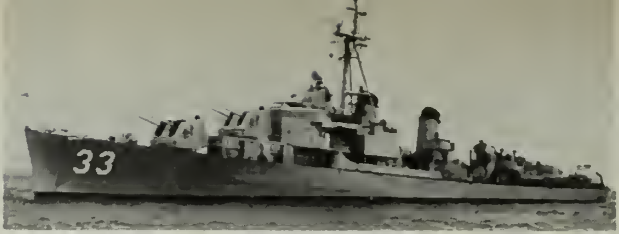


Top to bottom, MSBs, *54, 18* and *53*

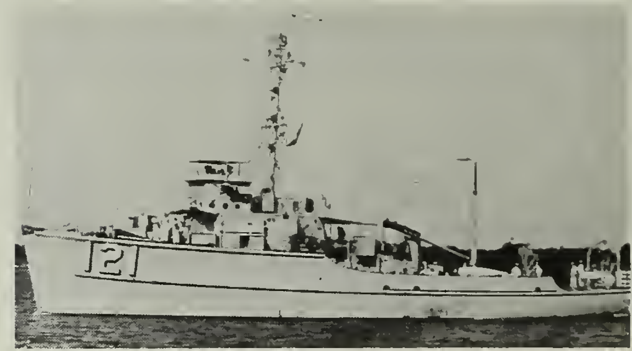


USS *Peregrine* (MSF 373)—Below: USS *Aggressive* (MSO 422)





USS Gwin (DM 33)



USS *Bluebird* (MSC 121)

In the Mine Force Family

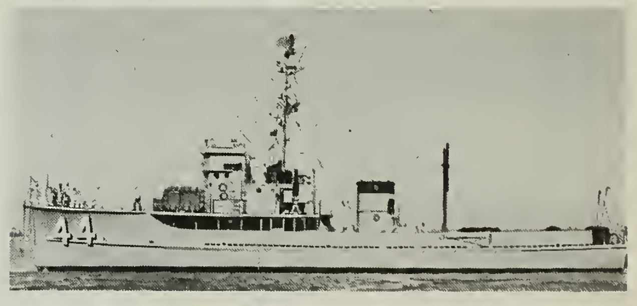
THE SHIPS AND boats used in mine warfare, as in the rest of the Fleet, are undergoing a big change these days.

Many of the minecraft which saw action in the Korean fighting and World War II have been put in mothballs, sold out of the Navy or converted to more modern types. The service craft employed in mine warfare are also passing through a transition period, in which the MSBs (Minesweeping Boats) are leading the way.

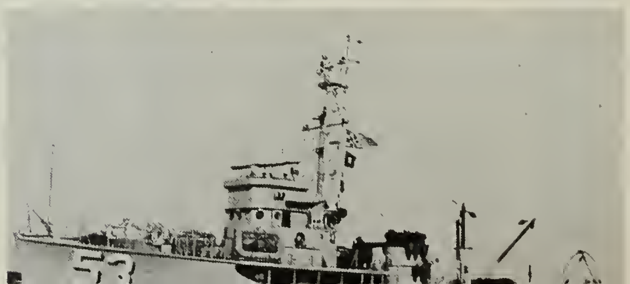
This modernization program is resulting in greater emphasis on wooden ships in the mine warfare field, but there are still quite a few steel-hulled "old-timers" around. USS *Peregrine,* a Fleet Minesweeper (Steel Hulled), and USS *Gwin,* a Destroyer Minelayer, both date back to World War II. USS *Bobolink,* a Coastal Minehunter, is also a holdover from World War II, but she has a wooden hull.

The other ships, and the MSBs, shown on this page belong to classes which have joined the Fleet within the past five or six years. They, along with new types now being built, give us the most modern mine warfare Navy in the world.

USS *Bobolink* (MHC 44)



USS *Robin* (MSC (O) 53)



LETTERS TO THE EDITOR

This section is open to unofficial communications from within the naval service on matters of general interest. However, it is not intended to conflict in any way with Navy Regulations regarding the forwarding of official mail through channels, nor is it to substitute for the policy of obtaining information from local commands in all possible instances. Do not send postage or return envelopes. Sign full name and address. Address letter to Editor, ALL HANDS, Room 1809, Bureau of Naval Personnel, Navy Dept., Washington, 25, D. C.

Widow's VA Option

Sir: In the September issue of All Hands, you mention an "option" offered to widows now drawing VA compensation for their husbands' service-connected death. My question is this: Who is going to advise me what to do when I have no papers which indicate on what basis I'm now receiving a pension. For instance, I get compensation of $150 plus $54.40 Social Security for the two children. What are these figures based on? How much do I get for myself as compensation and how much is for each child under this new law? —Mrs. E. B.

- *The Veterans Administration will notify you, and every other widow, dependent parent and guardian of children now receiving compensation for the service-connected death of the serviceman, of your rights and benefits under the Servicemen's and Veterans' Survivor Benefits Act. They will give you full information on options available and you'll have ample opportunity to make an election. Survivors at present receiving benefits will be given an option of electing to continue receiving their benefits or receive the benefits authorized under the Survivor Benefits Act.*

The Servicemen's and Veterans' Survivor Benefits Act (Public Law 881, 84th Congress) authorized widows now receiving compensation for service-connected death of their husband, $112 per month plus 12 per cent of their late husband's basic monthly pay computed on present active duty pay scales of rate and length of service at time of death. If your husband had more than 12 years' service his basic pay would be $273, and compensation for you under the Survivor Benefits Act would be $145 per month for life. (You may also be entitled to Old Age Survivors Insurance at the age of 62, which is administered by the Social Security Administration.)

This act further authorized benefits for children under 18 years of age to be paid by Social Security, based on the average monthly wage of your husband, until the child or children reach 18 years of age. Also a special VA benefit of $35 per month is payable to children between the ages of 18 and 21 who are attending a school or college approved by the VA. This special benefit is paid at the same time as the dependency and indemnity compensation and is intended to take care of children not otherwise covered by Social Security payments, which stop when children reach age 18.—Ed.

Obligated Service After 20?

Sir: Some of my shipmates have brought up a question that we can't answer. This is it: A man who has served twenty years reenlists for four more. He then decides he would like to transfer to the Fleet Reserve. Will he have to serve any certain amount of his new four-year enlistment?—D. S. B., SKC, USN.

- *No, this man wouldn't be required to serve any definite period of time after his reenlistment, provided he is eligible for transfer under present instructions. However, on transfer to the Fleet Reserve, if he received a bonus or reenlistment he will have to repay that portion for time which remains in his term of reenlistment.*

Your reference for this is Section 4, "NavCompt Manual."—Ed.

GI Training

Sir: I am trying to find out for sure if I will be eligible to go to college under the Korean G. I. Bill when I retire from the Navy on 20.

According to the information that I have been able to get on board ship, I would have three years from the expiration of my present enlistment to enter school.

I entered into this enlistment on 22 Oct 1951 and it expires 22 Oct 1957. If I reenlist on that date, I can be discharged by 22 Apr 1960 and be entered in school by 22 Sep 1960, just 30 days before the expiration of my three-year grace period.

Check me if I'm wrong.—D. T. B., BM1, USN.

- *On the basis of the facts as you present them, you're right. As you say, according to the Veteran's Readjustment Assistant Act of 1952 you must begin to use your educational rights within three years after your enlistment expires.*

However, it seems that you're pushing your margin of safety pretty close. It is quite possible that paperwork could delay your discharge and subsequent application, and thus jeopardize your entrance to school on time. To be sure that you have an adequate grace period, why don't you extend your present enlistment for one year before you reenlist? The extension would give you a year's grace (from October 1960 to October 1961) and need not delay your transfer to the Fleet Reserve.—Ed.

Boxer Awards for Korea

Sir: Can you tell me the campaign ribbons USS *Boxer* (CVS 21) was awarded during her 1953 tour in the Far East?—J. M., Des Moines, Iowa.

- *As a climax to her activities during the Korean conflict,* Boxer *was awarded in 1953 the Korean Service Medal, United Nations Service Medal, China Service Medal and Korean Presidential Unit Citation.*

Boxer *earned the hard way every award she received and, in doing so, managed to achieve quite a record.* Boxer *pilots flew a record number of missions and claim to have taken part in the last mission of the Korean conflict before the official cease-fire became effective on 27 Jul 1953.*

During her four combat cruises Boxer *pilots flew more than 12,000 sorties over Korea and dropped nearly 12,000 tons of bombs in addition to thousands of rockets. They fired more than four million rounds of 50 caliber ammunition and more than a million and one half of 20mm ammunition.*—Ed.

Parachute Insigne

Sir: I am a Naval Reserve Ensign, and have been designated to attend flight school. I would like to know if I am qualified to wear the parachutist's wings on the basis of Federal service as a "smokejumper" during the past two summers. During this service I underwent a complete training course and have to my credit 21 parachute jumps.—J. A. H., ENS, USNR.

- *You are not qualified to wear the Navy's parachute insigne at present. According to Article C-7405, "BuPers Manual," and Article 0225, "U. S. Navy Uniform Regulations," in order to be authorized the parachute insigne, one must be assigned to parachute jumping duty and have successfully completed a course as prescribed by a naval parachute unit, in addition to having made six jumps from aircraft in flight. Authorization to wear the Navy parachute insigne then continues until specifically revoked by the Chief of Naval Personnel.*—Ed.

NO VALENTINE PARTY—In ship's mess crew members of *USS Tarawa* (CVS 40) sweat out their share of the service-wide examinations for advancement.

Final Multiple

Sir: In the August exams I tried out for PR2. Before the results were announced I was transferred to my present duty station. When I received the results, which were forwarded to me by speedletter, I found that I had failed with a score of 49.75. Some of my buddies got scores like 50, 51, etc. Could you tell me why my score was a four-digit figure?—J. E. A., PR3, USN.

- *This is what happened. Your score is a final multiple, which includes time in rate, time in service, bonus for medals, etc., plus your examination score. It is always a four-digit figure. The exam scores, however, are whole numbers, i.e. 51, or 75.*—Ed.

Tuition Aid Program

Sir: I am a Reservist on active duty and would like to know if there is any provision for naval personnel in an active status to attend classes at private institutions with the Navy footing part of the tuition cost? I've searched high and low in the directives, but with little luck. Can you help me out?—J. H. T., YN3, USN.

- *In BuPers Inst. 1560.10 the Navy announced the resumption of the tuition aid program. Under this plan you can take courses at any accredited institution which is approved by your commanding officer and which (1) contributes to your professional capabilities, or (2) contributes to your qualifications for a baccalaureate degree.*

The Navy agrees to pay tuition amounting to 75 per cent of the cost, as long as it does not exceed $7.50 per semester hour or $5.00 per quarter hour. For example, if you were to take a three-semester-hour course at a total tuition fee of $51.00, the Navy would pay $22.50. If, however, you were to take a three-semester-hour course at an institution where the total fee is $24.00, the Navy would pay 75 per cent or $18.00. You must bear all other costs.

You'll find a more detailed description of the program on page 46 of the October 1956 issue of All Hands.—Ed.

Church Pennant

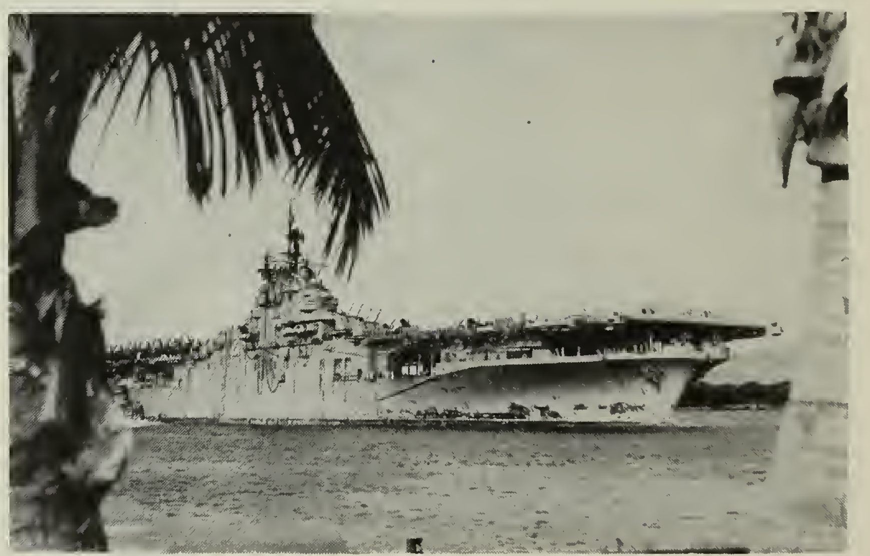
Sir: The old H. O. Publication No. 89 (*Flags, The United States and other Countries*), under the heading "Church Pennant," stated that "the church pennant is hoisted at the same point of hoist and over the ensign during the conduct of divine services on board vessels of the Navy."

Apparently I've looked in the wrong places, because I can't find a similar rule for shore stations. I thought I could find it in Chapter 21 of *Navy Regulations* but I didn't have any luck. Does the same rule apply to shore stations and activities; if so, where can it be found?

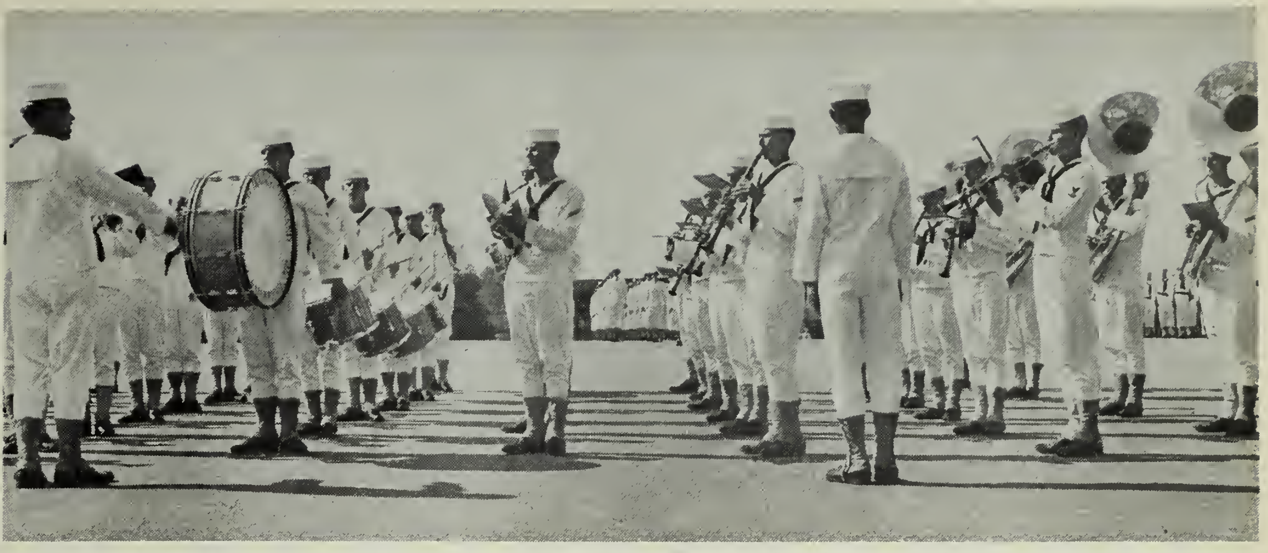
And can you name any publication currently available which both lists and illustrates the various flags (national, personal, special) and pennants?—F. L. B., CWO, USN.

- *According to Public Law 829, "No other flag or pennant should be placed above or, if on the same level, to the right of the flag of the United States of America except during church services conducted by naval chaplains at sea, when the church pennant may be flown above the flag during church services for the personnel of the Navy." The naval publication DNC 27* (U. S. Naval Flags and Pennants, Descriptions, Uses and Customs) *states in Chapter II, Article 201.1 that: "The words 'at sea' are interpreted for U. S. Navy purposes as meaning 'on board a naval vessel.' Shore stations, while not authorized to display the church pennant above the ensign, may display it separately if desired."*

Illustrations of one or more national, personal and special flags and pennants may be found in the following: Navy Hydrographic Office publication National Flags and Ensigns *(HO Misc. 15181); Jane's* Fighting Ships *(at the beginning of each section devoted to a country's Navy); and Webster's* New International Dictionary *(Color Plates I, V, VI, VII and VIII, facing page 924 in the Second Edition). Descriptions of various flags and pennants may also be found published in DNC 27.*—Ed.



BETWEEN ROUNDS—*USS Boxer* (CVS 21) enters Pearl Harbor on way to States for overhaul. She just finished her first battle tour in Korean waters.



RECRUITS SOUND OFF—Navy music-makers of Bainbridge NTC band supply the down beat for parade.

No Plastic Raincoats

SIR: I have noticed a few officers and enlisted men wearing the clear plastic-type raincoats, which are sold at most Exchanges. Has the Uniform Review Board ever approved them for regulation wear?—M. L. G., HM1, USN

- *They have been considered from the standpoint of utility and appearance, but weren't recommended for Navymen. Plastic-type raincoats may be all right for one man, but on a group of men they would not present a smart appearance. In addition, they wrinkle easily and wouldn't hold up in the varying climates as cloth raincoats do. The men you noted were strictly out of uniform.*—ED.

Lump Sum Checkage of Pay

SIR: I was discharged at Norfolk, Va., in December 1955, and reenlisted a month later in Chicago, Ill. Since I selected Option 5, I was assigned to San Diego "for further transfer," and was subsequently ordered to the San Diego-based USS *Chevalier* (DDR 805).

When I reported aboard *Chevalier*, I received travel allowance for my wife, plus $77.10 dislocation allowance. Now the disbursing officer has decided I didn't rate a dislocation allowance, and has proceeded to deduct the entire amount in one lump sum, leaving me with a $2 payday.

I don't know whether I rated the dislocation allowance or not; I do know that it takes money to live, and it doesn't help matters when the entire deduction is arbitrarily taken from one pay check. Couldn't the deductions have been spread out over several paydays?—D. C. S., MM2, USN.

- *"Joint Travel Regulations," paragraph 9002 (item 3), authorizes payment of dislocation allowance to members who reenlist without a break in active service at the same activity at which they were discharged. As you did not reenlist without a break in active service, and reenlisted at an activity other than where you were discharged, you were not entitled to dislocation allowance.*

As for the lump-sum checkage of your pay, the "Navy Comptroller Manual," paragraph 044596-3c, provides that a member indebted to the United States as a result of an erroneous payment may not be checked in excess of two-thirds of his pay in any one month. "Pay" is defined as basic pay, special pay and incentive pay, minus withholding tax and the mandatory basic allowance for quarters contribution.

On this basis, the checkage of $77.10 in one month is in accordance with regulations, since two thirds of your pay is roughly estimated to be $80.

Rules and regulations concerning pay do provide that if a member feels that checkage in a lump sum would cause undue hardship, AND IF *such amount exceeds two-thirds of the total of his monthly basic pay, incentive pay and special pay, he may submit a written request to his commanding officer via the disbursing officer indicating his financial condition and the maximum monthly installments he thinks he can afford. Such a request will be endorsed by the commanding officer to the disbursing officer with his determination as to the amount of the monthly deduction to be made.*—ED.

Beginning Date for Sea Duty

SIR: I have been assigned to a precommissioning detail after a tour of shore duty. Will my sea duty start on the day of the assignment or on the date of the commissioning?—P. W. O'B., EMC, USN.

- *Chief, since you are being assigned after a tour of shore duty, your sea duty will begin on the date the ship is commissioned.*—ED.

Basic Test Battery Retest

SIR: I am anxious to get into the NavCad program, but I did not receive a passing score on the Basic Test Battery. Is there any way I can get approval to retake the tests?—W. D. M., FA, USN

- *Yes, there is. As long as you meet all the other requirements for the Naval Aviation Cadet program, you may put in a request to the Chief Of Naval Personnel (Attn: Pers B2242) for a retest on the BTB.*

Be sure you forward your request through official channels.—ED.

Special Weapons Program

SIR: As a last resort I am turning to you for information, because I am told that you know all of the answers.

I want very much to get into the Special Weapons Program, but am unable to locate any BuPers instruction that outlines the procedure for doing so. I hope you can help me.—J. A. H., YN1, USN.

- *We're honored that you hold us in such high esteem. We don't know ALL the answers, but we can help you this time.*

BuPers Inst. 1306.46 outlines the requirements for personnel assigned to Special Weapons Programs. Requests are given prompt consideration and are approved if billets are available and if the applicant meets the general requirements for assignment. The requirements are: (1) high school education; (2) GCT of 50; (3) excellent record of performance of duty; (4) good moral record; (5) no indication of lack of financial responsibility; and (6) three years' obligated service at time of transfer.

It is possible that waivers may be granted in cases where men have outstanding compensatory qualifications. You must be cleared for access to Top Secret classified matter.—ED.

MODEL SHOWS how vehicles will be loaded aboard the Army's new high speed beach lighter. In World War II the Army had over 12,000 ships and boats.

Army Ships and Boats of WW II

Sir: At the close of World War II the Army had a great many ships and boats under its direct control. Are there any statistics on the approximate number and by whom the ships and boats were manned?—R.F.P., TE1, USN.

- *During World War II ocean-going Army ships and boats were manned by civilian crews. The armed guard was generally U. S. Navy personnel and the medical group was Army. The smaller Army vessels and craft under 1000 tons were manned almost entirely by civilian crews, who received training, in part, by the Navy. At that time Army vessels, including landing craft, etc., numbered 186 vessels over 1000 tons and 12,000 vessels under 1000 tons. This totaled a little more than one-fifth of the Navy's 68,936 combatant and non-combatant vessels as of 31 Aug 1945.*—Ed.

USS United States

Sir: We have a question concerning boat hails. When a boat approaches a ship at night with the commanding officer aboard, one of the boat crew sounds out the name of his ship. Our question is on this illustration as follows: When a carrier is named *United States* and the gig of this carrier is returning at night and the boat crew sounds out "United States." How will the OOD know who is aboard, the commanding officer or the President of the United States?

We ourselves would call out "President of the United States" if the President were aboard and "United States" if the commanding officer were aboard. We would like to know the proper procedure in the above case.—S. K. W., BM2, USN, and F. C. E., BM3, USN.

- *You are right. The new carrier* USS United States *presents a problem in boat calls as you so aptly point out. Should this boat call become ambiguous after* United States *is in service the CO will doubtless originate the necessary correspondence to resolve the problem.*

It is felt that any visit by the President of the United States would be anticipated and no trouble would result. In addition, official calls are invariably made between 0800 and sunset so that a boat hail after sunset could mean only that the CO is returning to his ship.—Ed.

Sailors of the Week

Sir: Norfolk has saluted over 200 Navymen as "Sailor of the Week" since this program began on 23 Jun 1952. There has been an average of four "Sailors of the Week" from every state in the Union. This program, incidentally, has been imitated in various other "Navy Towns" and has been cited in numerous national publications.

The "Sailor of the Week" program has become a symbol of the New Norfolk's attitude toward the Navy. Although much remains to be done for sailors in Norfolk, the program is a testimonial to the goodwill that exists in that rejuvenated city which is trying hard to be a good "liberty port."—S. W., CWO, USN.

'Year Group' on Rosters

Sir: A question has recently arisen concerning the assignment of officers to "year groups," as is currently required on the various type commander's "Roster of Officers."

There are two interpretations of the term "year group." One is that it represents the Naval Academy class with which the officer was first commissioned. The other is that it represents the calendar year in which the officer was first commissioned. This is particularly confusing where both Reserve officers who have integrated with the regular Navy, and Naval Academy officers who graduated during the war years, are attached to the same unit.

Any information you can give to help clarify this term would be appreciated. —J. K. B., LT. USN.

- *We'll do what we can, although it's hard to give an accurate definition of "year group" in brief form.*

All naval officers on active duty except TARs, Waves, retired officers, and warrants are arranged in their proper seniority order on one lineal list. This list has unrestricted line, restricted line, limited duty officers, staff corps officers, permanent regulars, temporary officers, and reserves on active duty. It indicates the standing of each officer with respect to every other.

There is also a way for determining the length of commissioned service of each permanent regular officer. This is the "service date" described in note two (page VI) of the 1 Jan 1956 "U. S. Navy Register." Remember that an officer's service date, once established, does not change, unless he transfers from line to staff corps.

In the lineal list, it is important to have some means of sub-dividing groups of officers who are contemporaries or near contemporaries. These subdivisions must make up solid blocks on the lineal list, including every officer whose lineal position is between the senior and the junior man in his group. These groups or blocks are called "year groups." The dividing lines which establish these year groups are placed in such a way that the majority of permanent Regular unrestricted line officers who have not lost numbers or precedence are in the year group corresponding to their service date.

If you are an unrestricted line officer and have never failed of selection or have never been selected from below the promotion zone, you will have the same year group as your service date. If you have failed of selection one or more times you will probably be in a year group junior to that corresponding to your service date. If you were ever selected for promotion from below the promotion zone, you may now be in a year group senior to that corresponding to your service date. It is therefore possible for an officer to change his year group every year through repeated failures of selection.

"Year group" has little meaning for staff corps or restricted line officers, except to identify them with the unrestricted line officers who will determine their eligibility for promotion and their year and position in the promotion zone.

Reserve and temporary officers (who do not have service dates), are considered as being in the year group in which their lineal position places them.

A quick description of your year group—briefly speaking—might be the fiscal year in which you were first commissioned provided you never failed of selection or never were selected from below the promotion zone, and provided that you were not originally commissioned between the date of graduation of the Naval Academy class and 30 June of the same year.—Ed.

Phil Sea Gets Around

Sir: I would like to know whether or not the Navy Unit Commendation was awarded to USS *Philippine Sea* (CVS 47) during the period 1 Aug 1950 to 31 May 1951.

Also, I am very much interested in her history; how she was named, when she was launched, what she has done, etc. In other words, I'd like to know whatever you can tell me about her. —J. H. T., BT3, USN.

- *We get you, mate. Let's take first things first.*

The Secretary of the Navy awarded the NUC to Philippine Sea *on 7 Dec 1954 for two periods, 4 Aug 1950—31 May 1951, and 31 Jan 1953—27 Jul 1953.*

Now for a historical look at her. As you know, the Navy has a policy of naming aircraft carriers for names of famous ships formerly on the Navy list and for important battles of present or past wars. So CVS 47 was named in honor of the battle of the Philippine Sea of 18-19 Jun 1944, the historic "Marianas Turkey Shoot."

Philippine Sea was launched on 5 Sep 1945 and became an official unit of the Navy when she was put into commission eight months later on 11 May 1946. A training period in June was followed in September by a shakedown cruise in the Caribbean with Air Group Twenty.

On 29 Jan 1947 she headed for the Antarctic region with a polar exploration party and during the remainder of 1947, operated in the Atlantic and Caribbean.

In the spring of 1948 Philippine Sea *left the Mediterranean to join the Sixth Fleet. She showed her colors in France, Greece, Tunisia and Sicily, to name but a few of the countries she visited. June found her back in the United States working with carrier control approach landings. By November she was helping with exploration of the lower rim of the Arctic Circle in a cold weather operation designed to test planes, ships and equipment.*

10 Jun 1950 was the date Philippine Sea *became a part of the Pacific Fleet. At the outbreak of the Korean conflict she sailed for the Western Pacific as part of Task Force 77. From her deck air strikes were launched that hit strategic targets in the Yellow Sea.*

In April 1951 she led Task Force 77 and other parts of the Seventh Fleet down through the Strait of Formosa and the South China Sea. On 9 Jun 1951 she arrived back at San Francisco only to return to the Western Pacific on 20 Jan 1952. Her Korean duty ended 1 Aug 1953.

For her operations off Korea Philippine Sea *received the Navy Occupation Medal—Asia, the China Service Medal (Extended) and the Korean Service Medal with nine bronze stars.*—Ed.

'SLIDING HOME'—*USS Philippine Sea* (CVS 47) enters her home port at Long Beach, Calif. For actions during Korean conflict she won the NUC.

Overseas Orders

Sir: I have several questions to which I have been unable to obtain any satisfactory answers.

1. When a man receives orders to overseas shore duty, not as the result of his own request, is he ever permitted to turn down such orders?

2. Upon completion of a tour of overseas shore duty to which a man had been ordered voluntarily, does the duty count as a normal tour of overseas shore duty when computing eligibility for overseas shore duty?

3. What are the dependent transportation stipulations to a man aboard a rotating ship, who is married to an alien wife?

4. Are servicemen's wives who are aliens allowed to enter overseas areas outside of their own country?

5. If the service record of a man who recently reenlisted does not have any of his previous sea duty entered, what can he do to establish his previous duty so that he may request overseas shore duty?—R. L. R., EMC, USN.

- *This is a big request, Chief. Let's tackle them one at a time.*

1. No. If you receive orders for overseas shore duty you can't turn the orders down.

2. Whatever scuttlebutt you might have heard to the contrary, forget it. The duty DOES *count when computing eligibility for overseas shore duty.*

3. Whether or not his wife is alien, he is entitled to normal dependent transportation when ordered to another duty station, subject, of course, to existing immigration laws and housing facilities. The amount he receives will not be more than the cost of transportation from the home port or yard of the ship to the new duty station.

4. They are, so long as approval has been obtained from the area commander.

5. The best thing for him to do is to have his command originate an inquiry to the Bureau asking for his sea duty date. The Bureau will check his duplicate service record to determine the correct date.—Ed.

Ship Reunions

News of reunions of ships and organizations will be carried in this column from time to time. In planning a reunion, best results will be obtained by notifying the Editor ALL HANDS Magazine, Room 1809, Bureau of Naval Personnel, Navy Department, Washington 25, D. C., four months in advance.

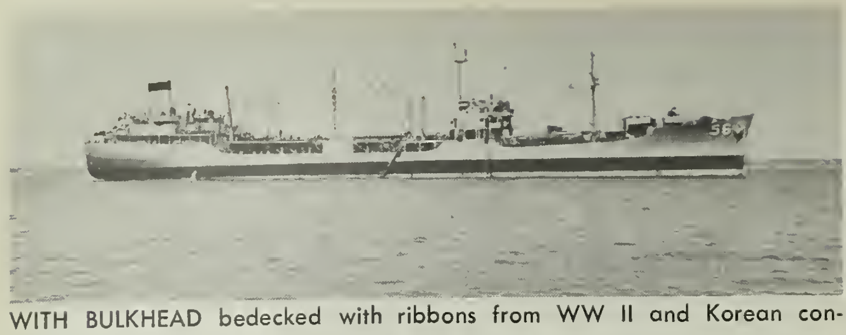
- USS *South Dakota* Veterans' Association of WW I—The 36th annual reunion of the World War I crew will be held in Seattle, Wash., on 6 April. For further details, write to Carl Haggland, 2519 N.E. 59th Avenue, Portland 13, Ore.
- USS *Mink* (IX 123)—All former shipmates who are interested in holding a reunion in Boston during May 1957 — or at some other time and place to be decided by mutual consent — should contact Robert L. White, YNCA, 124 Alden Street, Malden 48, Mass.
- USS *SC 699* — All former crew members who are interested in holding a reunion, with time and place to be decided by mutual consent, should write to James W. Foristel, 7 Windsor Road, Alexandria, Va.

Allotment Check to Wife

Sir: I would like to have my family allotment check sent directly to the bank and deposited in my wife's account. Is this possible? If so, how do I go about arranging it?—J. E. H., MM3, USN.

- *Yes, you may do this. Your wife's allotment may be registered to a bank to her account, but it is necessary for you to make the change. Your disbursing officer will be glad to lend you a hand on the mechanics of the operation.*

Reference is paragraph 044402-3c of "Navy Comptroller Manual."—Ed.



WITH BULKHEAD bedecked with ribbons from WW II and Korean conflict, *USS Aucilla* (AO 56) continues her career servicing the Sixth Fleet.

'Mighty A'

SIR: I have been reading in ALL HANDS ever since I've been able to read, where members of a ship's company address their complaints to you. Well, I have one.

My ship and 220 proud sailors of USS *Aucilla* (AO 56) would like to know why you have overlooked *Aucilla*.

We have been stationed overseas here in the Mediterranean since 29 May 1955, and never once in all that time has there been the slightest word on *Aucilla* in ALL HANDS.

We would like you to take into consideration the following facts, and after you have read them, I am sure you will find room for an article on the Mighty A.

I believe, but wouldn't bet on it, that *Aucilla* holds some type of record for being overseas so long in peacetime. There are numerous ships now stationed here throughout the Mediterranean, but none more worthy than *Aucilla*.

During our past 18 months *Aucilla* has won the "E" for being tops in her field. Besides winning the "E," she has been a real work horse of the Sixth Fleet. Refueling at two or three in the morning is not unusual for this white tanker. Any boatswain's mate will tell you that it's just regular routine.

In addition she has handled mail and parcel post for dozens of ships stationed here, and some — like USS *Coral Sea* (CVA 43)—average better than 100 bags per ship. During the Christmas season, even small ships such as USS *Bordelon* (DDR 881) averaged 13 to 16 bags of parcel post per mail call.

At Christmas *Aucilla* held a Yuletide party for orphans of Barcelona, Spain. It was not an ordinary affair. In three months' time her crew had raised close to $1400 for that party, to be used for the purchase of books, clothes and toys for these children.

All of us on board *Aucilla* are mighty proud of her and hope that maybe you can mention her in ALL HANDS.—W. L. K., TE3, USN.

- *We couldn't possibly improve on your comments, and agree you have every reason for pride in your* Aucilla. *She was quite a gal even before you met her in the Med, and earned herself a nice chunk of history. Here's her story, in case you hadn't heard:*

Aucilla *was launched on 20 Nov 1943 and commissioned on 22 December. In late April 1944, after a training cruise in Trinidad, she took part in fueling cruisers and destroyers just before D-Day in preparation for the invasion.*

During the latter months of 1944 Aucilla *operated in support of the Third Fleet at the time it struck Luzon in connection with the reoccupation of the Philippines. In January 1945, she went with the Fleet into the South-China Sea during the fast carrier task force strikes on Camranh Bay, Hong Kong, Hainan and Formosa in support of the landing operations at Lingayen Gulf.*

February 1945 found Aucilla *giving support to the Fifth Fleet at the time of the invasions and occupations of Iwo Jima and Okinawa.*

At the end of WW II Aucilla *was giving logistic support for the occupation forces which entered Tokyo Bay.*

All told, Aucilla *earned five battle stars and the Philippine Liberation Ribbon for her participation in WW II. During the Korean conflict she received the Korean Service Medal and the United Nations Service Medal. She earned the Navy Occupation Service Medal (Asia and Europe) for service in 1945-49, NOSM (Europe) during Korean Conflict, and China Service Medal (Ext.) for service in 1947.*

If you are interested in a more detailed history, drop a line to the Division of Naval History, Ship's History Section, Navy Department, Washington 25, D. C. They'll send a complete history upon request.—ED.

Computing Time in Officer Status

SIR: I expect to retire next year. Could you tell me whether or not my commission time for retirement is computed from date of rank or date of acknowledgment? H. E. T., LT, USN.

- *It's counted from the day that you accept your commission.*

Remember also, that you will have to have a minimum of 10 years' commissioned service to be eligible for retirement in your present status.—ED.

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A Fast Look-See at the Fleet

A QUICK GLANCE at the various types of ships silhouetted in this month's centerspread will give you an idea of the complexity of today's modern Navy.

A more detailed study will make you realize the vast number of different types of ships needed in order to execute the many tasks required.

This centerspread conforms with the latest list of types and designations of the ships and service craft, altered to comply with current security regulations.

Basically, many of the designators and silhouettes are the same as they were "way back when" — but in today's modern Navy, types, designators and even appearances of ships are taking on the new look.

In this atomic era, construction of radically new ships and conversion of others are necessary to keep pace with the rapidly changing concepts of modern warfare. Our ships of today and tomorrow are being designed and built so that our naval striking power will be capable of keeping the world's sea lanes open no matter what type of hostilities we may be forced into.

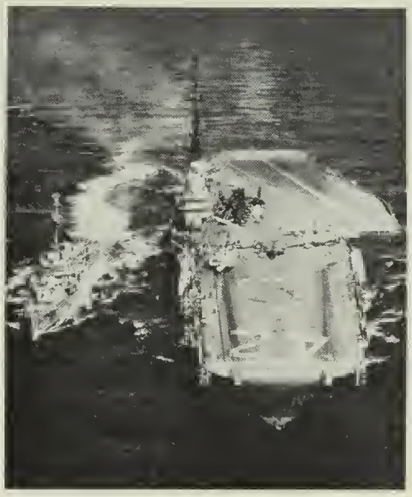
Even in peacetime, a modern Navy capable of keeping the sea lanes open is paramount to the security of the U. S.

Today's ships would make the old time Navyman gasp with wonderment. Whether in operation, in the building ways or on the drawing boards, they are a far cry from those of yesteryear.

They include such almost unbelievable ships as 60,000-ton high-speed, attack aircraft carriers; nuclear powered submarines and cruisers; guided missile capital ships, cruisers, destroyers, frigates and submarines; radar picket destroyers, new types of mine sweepers, escort vessels and submarines; replenishment Fleet tankers and escort helicopter aircraft carriers.

If you studied the type and designator listings and review the accompanying charts, you will notice that it takes more than 180 different types of ships to run our modern Navy. They are divided, according to mission, into three distinctive categories — combatant ships, auxiliary vessels and service craft.

The combatant ships—the heart of today's Navy — are sub-divided into warships, amphibious warfare vessels, mine warfare vessels and patrol vessels. Among them are two types of battleships, six kinds of cruisers, two command ships, five different designations of aircraft carriers, seven types of destroyers, five types of submarines, 18 various types of amphibious vessels, 12 kinds of mine warfare vessels and a variety of 11 patrol vessels.



The auxiliaries, of which there are 48 types, range from the large replenishment fleet tankers, tenders, repair ships and transports to floating drydocks, distilling ships and sailing craft.

The indispensable service craft—the final category of naval ships—consists of a variety of 66 kinds of yard, harbor and district craft. Without these "odd-job" vessels, the larger combatant and auxiliary ships would be handicapped.

Many new ships have made their appearance in the operating forces in recent months and a number of others are scheduled. In a report to Congress Admiral Arleigh A. Burke, Chief of Naval Operations, stated that the Navy's shipbuilding and conversion program is "designed to keep the Navy modern, with the continued capability of dominating the seas no matter what eventuality."

Admiral Burke added that this program "placed great emphasis on striking power, especially naval air striking power. It provides another substantial step toward a nuclear propelled Navy which we intend to accelerate each year. It provides for the maximum use of nuclear and other new weapons, and . . . accelerates our integration of guided missiles into the Fleet."

In line with this thinking, the Navy's '57 shipbuilding program (Public Law 523) calls for the construction of 23 new ships, all of which are combatant vessels except for one auxiliary. They are:

- *The sixth 60,000-ton attack aircraft carrier* of the *Forrestal* class.
- *An 18,000-ton nuclear powered guided missile cruiser* capable of steaming great distances at high speed without refueling.
- *Four guided missile frigates,* each of about 4000 tons, with sea-keeping qualities to permit high-speed operations in rough weather. They will be equipped with dual *Terrier* missile launchers and will have excellent submarine detection capabilities as well.
- *Eight guided missile destroyers* equipped with every new device for anti-submarine warfare.
- *Six nuclear powered submarines* with a new and advanced hull design.
- *Two 14,000-ton prototype escort vessels* designed to be mass-produced rapidly from non-critical materials.
- *One ammunition ship* capable of rapid replenishment-at-sea with a speed of 20 knots.
- *5000 tons of landing and service craft* including a 30-knot prototype hydrofoil landing craft to replace the eight-knot diesel-powered LCM.

In addition to the new construction, plans call for the conversion of four aircraft carriers; five light cruisers to guided missile ships; one guided missile submarine; one amphibious assault ship (a CVE for handling helicopters to be used in amphibious landings); a high-speed, large-cargo-capacity attack transport; a seaplane tender capable of servicing the P6M *Seamaster,* six radar picket escort vessels and four ocean radar station ships for extending the nation's DEW Line seaward.

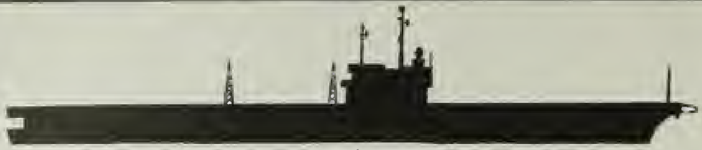
With this shipbuilding and conversion program, even greater and more versatile ships will continually be added ot our operating forces. However, bigger projects are planned, as the '57 program also provides for the design and advance procurement of one nuclear powered aircraft carrier.

U.S. NAVY:

COMBATANT

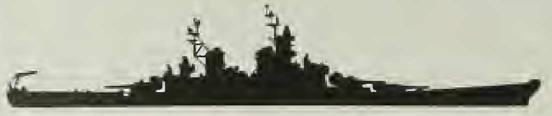
WARSHIPS

AIRCRAFT CARRIERS


CVA—Attack Aircraft Carrier

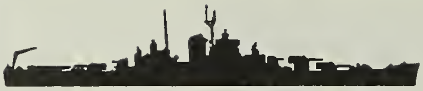
CVS—ASW Support Aircraft Ca

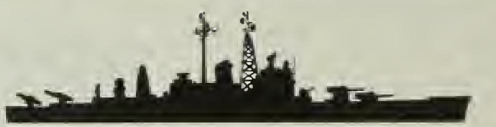
BATTLESHIPS


BB—Battleship

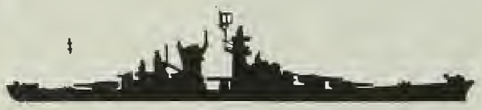
BBG—Guided Missile Capital Ship

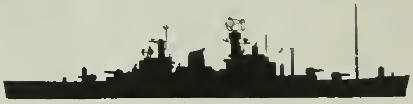
CRUISERS


CA—Heavy Cruiser

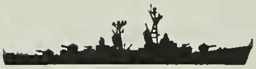

CAG—Guided Missile Heavy Cruiser

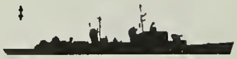
COMMAND SHIPS

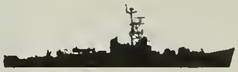

CBC—Large Tactical Command Ship


CLC—Tactical Command Ship

DESTROYERS

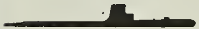

DD—Destroyer

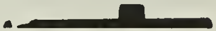

DDC—Corvette

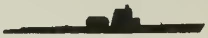

DDE—Escort Destroyer

DDG—Guided Missile Destr

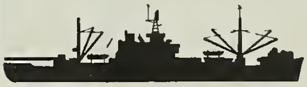
SUBMARINES

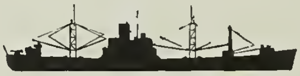

SS—Submarine

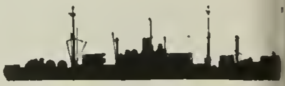

SS (N)—Nuclear Power Submarine

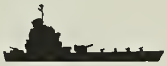

SSG—Guided Missile Submarine

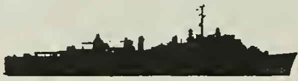
AMPHIBIOUS WARFARE SHIPS

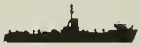

AGC—Amphibious Force Flagship

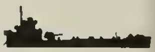

AKA—Attack Cargo Ship


APA—Attack Transport

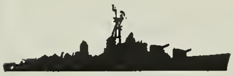

IFS—Inshore Fire Support Ship

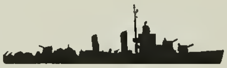

LSD—Dock Landing Ship

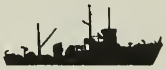

LSM—Medium Landing Ship

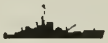

LSMR—Medium Landing Ship (I

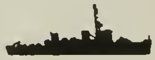
MINE WARFARE SHIPS


DM—Minelayer, Destroyer


DMS—Minesweeper, Destroyer

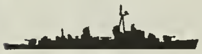

MCS—Mine Warfare Command & Support Ship

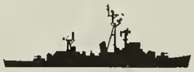

MHC—Minehunter, Coastal

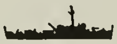

MMF—Minelayer, Fleet

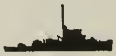
M

PATROL SHIPS


DE—Escort Vessel

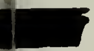

DER—Radar Picket Escort Vessel

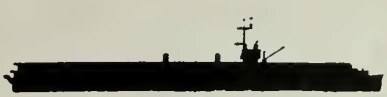

PC—Submarine Chaser (173′)


PCE—Escort (180′)

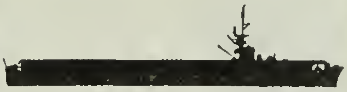
PCER—Re

OFILE OF THE FLEET




CVL—Small Aircraft Carrier

CVHE—Escort Helicapter Aircraft Carrier


CVE—Escort Aircraft Carrier

‡ *Accurate silhouette not shown*
* *In construction or planned*

Silhouettes shown are near approximations only and details are not accurate in all cases.

For security reasons no attempt has been made to establish an accurate relative scale of ship sizes.

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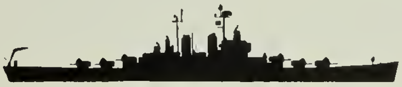
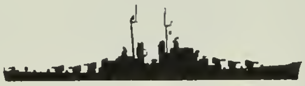
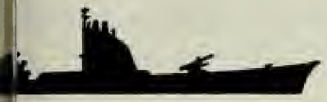
Bureau of Naval Personnel

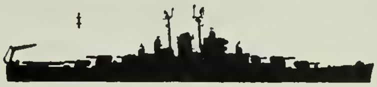
CB—Large Cruiser

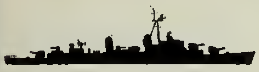

CL—Light Cruiser

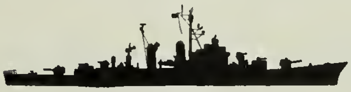

CLAA—Antiaircraft Light Cruiser


— Guided Missile Cruiser

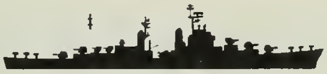
‡

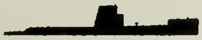

CLG—Guided Missile Light Cruiser

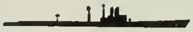

DDR—Radar Picket Destroyer

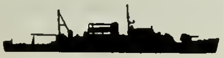

DL—Frigate

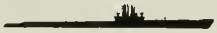
‡

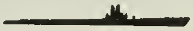

DLG—Guided Missile Frigate

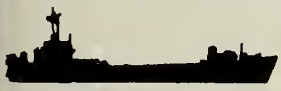

SSK—Anti-Submarine Submarine


SSR—Radar Picket Submarine


APD—High Speed Transport

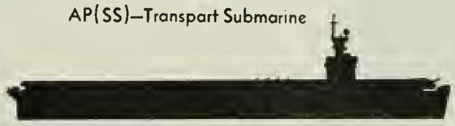

AK(SS)—Carga Submarine


AP(SS)—Transpart Submarine

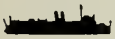

LST—Tank Landing Ship

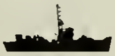
‡ *

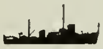
LPH—Amphibious Assault Ship


CVHA—Assault Helicopter Aircraft Carrier

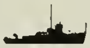
layer,

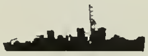

MMC—Minelayer, Coastal

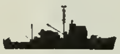

MSA—Minesweeper, Auxiliary


MSC(O)—Minesweeper, Coastal (old)

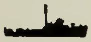
‡

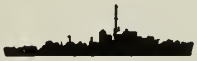

MSC—Minesweeper, Caastal (nanmagnetic)

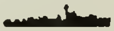

MSF—Minesweeper, Fleet (steel hulled)

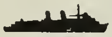

MSO—Minesweeper, Ocean (nonmagnetic)

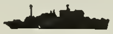
(180')

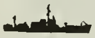

PCS—Submarine Chaser (136')


PF—Patrol Escort


PGM—Matar Gunboat


PR—River Gunboat


PY—Yacht


SC—Submarine Chaser (110')

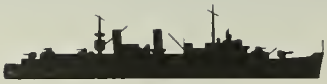
continued on next page

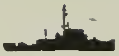
U. S. NAVY: PROFIL

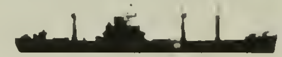
AUXILIARY SHIPS

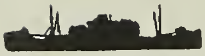
‡ *Accurate silhouette not shown*
• *In construction or planned*

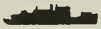
For security reasons no attempt has been made to establish on accurate relative scale of ship sizes.

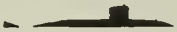

AD—Destroyer Tender

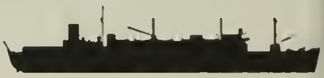

ADG—Degaussing Vessel

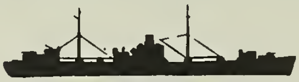

AE—Ammunition Ship

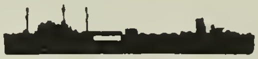

AGS—Surveying Ship

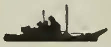

AGSC—Coastal Surveying Ship

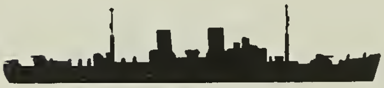

AG(SS)—Auxiliary Submarine


AH—Hospital Ship


AKS—General Stores Issue Ship


AKV—Cargo Ship and Aircraft Ferry


AN—Net Laying Ship


AP—Transport

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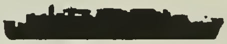
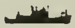
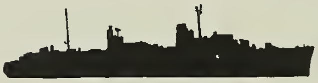
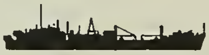
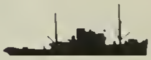

APB—Self-propelled Barracks Ship

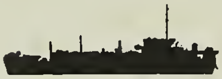

APC—Small Coastal Transport


ARH—Heavy-hull Repair Ship

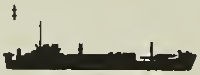

ARL—Landing Craft Repair Ship

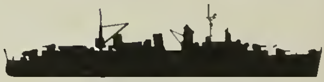

ARS—Salvage Ship

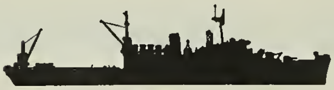
‡

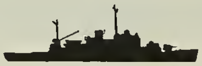

ARVA—Aircraft Repair Ship (Aircraft)

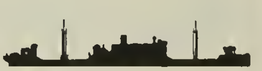
‡


ARVE—Aircraft Repair Ship (Engine)


AS—Submarine Tender


AVM—Guided Missile Ship


AVP—Small Seaplane Tender


AVS—Aviation Supply Ship

SERVICE CRAFT

Silhouettes not shown

AB—Crane Ship
AFDB—Large Auxiliary Floating Dry Dock
AFDL—Small Auxiliary Floating Dry Dock
AFDM—Medium Auxiliary Floating Dry Dock
APL—Barracks Ship (non-self-propelled)
ARD—Auxiliary Floating Dry Dock
AVC—Large Catapult Lighter
LCU—Utility Landing Craft
MSB—Mine Sweeping Boat
MSI—Minesweeper, Inshore
PT—Motor Torpedo Boat
PYC—Coastal Yacht
SST—Target and Training Submarine

X—Submersible Craft
YAG—Miscellaneous Auxiliary
YAGR—Ocean Radar Station Ship
YC—Open Lighter
YCF—Car Float
YCK—Open Cargo Lighter
YCV—Aircraft Transportation Lighter
YD—Floating Derrick
YDT—Diving Tender
YF—Covered Lighter (self-propelled)
YFB—Ferryboat or Launch
YFD—Yard Floating Dry Dock
YFN—Covered Lighter (non-self-propelled)

YFNB—Large Covered Lighter
YFND—Covered Lighter (for use with dry docks)
YFNG—Covered Lighter (special purpose)
YFNX—Lighter (special purpose)
YFP—Floating Power Barge
YFR—Refrigerated Covered Lighter (self-propelled)
YFRN—Refrigerated Covered Lighter (non-self-propelled)
YFRT—Covered Lighter (Range Tender)
YFT—Torpedo Transportation Lighter
YG—Garbage Lighter (self-propelled)

OF THE FLEET CONTINUED

ilhouettes shown are near approximations only and details are ot accurate in all cases.

AF—Store Ship

AG—Miscellaneous

AGB—Icebreaker

AGP—Motor Torpedo Boat Tender

AK—Cargo Ship

AKD—Cargo Ship, Dock

AKL—Light Cargo Ship

AKN—Net Cargo Ship

AO—Oiler

AO(SS)—Submarine Oiler

AOG—Gasoline Tanker

AOR—Replenishment Fleet Tanker

AR—Repair Ship

ARB—Battle Damage Repair Ship

ARC—Cable Repairing or Laying Ship

ARG—Internal Combustion Engine Repair Ship

B—Advanced Aviation Base Ship

ARST—Salvage Craft Tender

ARV—Aircraft Repair Ship

ARSD—Salvage Lifting Vessel

ASR—Submarine Rescue Vessel

ATA—Auxiliary Ocean Tug

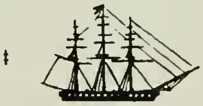
ATF—Fleet Ocean Tug

ATR—Rescue Ocean Tug

AV—Seaplane Tender

AW—Distilling Ship

CVU—Utility Aircraft Carrier


IX—Unclassified Miscellaneous

YGN—Garbage Lighter (non-self-propelled)
YHB—House Boat
YM—Dredge
YMP—Motor Mine Planter
YMS—Auxiliary Motor Mine Sweeper
YNG—Gate Vessel
YO—Fuel Oil Barge (self-propelled)
YOG—Gasoline Barge (self-propelled)
YOGN—Gasoline Barge (non-self-propelled)
YON—Fuel Oil Barge (non-self-propelled)
YOS—Oil Storage Barge
YP—Patrol Vessel
YPD—Floating Pile Driver

YPK—Pontoon Stowage Barge
YR—Floating Workshop
YRB—Submarine Repair and Berthing Barge
YRBM—Submarine Repair, Berthing and Messing Barge
YRDH—Floating Dry Dock Workshop (Hull)
YRDM—Floating Dry Dock Workshop (Mach)
YRL—Covered Lighter (Repair)
YSD—Seaplane Wrecking Derrick
YSR—Sludge Removal Barge
YTB—Large Harbor Tug
YTL—Small Harbor Tug
YTM—Medium Harbor Tug

YTT—Torpedo Testing Barge
YV—Drone Aircraft Catapult Control Craft
YVC—Catapult Lighter
YW—Water Barge (self-propelled)
YWN—Water Barge (non-self-propelled)

(Note: Where the identifying classification and hull number of a ship or service craft is preceded by the letter "E" it indicates that the particular vessel or craft is "Experimental." Similarly, the prefix "T" indicates that the vessel is assigned to MSTS (Military Sea Transportation Service).)

★ ★ ★ ★ TODAY'S NAVY ★ ★ ★ ★

NAVY'S FIRST guided missile destroyer, *USS Gyatt* (DDG 712) heads to sea out of Boston. The converted DD packs twin *Terrier* launcher astern.

Ash Can Collectors

No doubt about it—a Navy frogman has an exacting and hazardous job—under the best of circumstances. His problems multiply when the assignment calls for retrieving 500-pound ash cans from the bottom of a harbor.

This has been the task of a five-man Navy Explosive Ordnance Demolition team working out of the Naval Ordnance Facility, Taura, Japan.

At the end of World War II an unknown number of depth charges were dumped into Yokosuka Harbor. They are now being brought to the surface and sent ashore for disposal.

Using specially-rigged medium landing craft, the team dives in about 40 feet of water with a three-foot visibility at the bottom. The limited visibility, complicates the problem of finding the charges, since they are buried under a foot of silt.

The divers work together in pairs, probing for metallic objects with a special ordnance tool.

When a charge is located, the boat above pinpoints the location with a marking buoy and the harbor crane moves to hoist the explosive to the surface.

More Navy Housing in Japan

A contract to build 68 units of Navy housing at Kamiseya and two units at Totsuka has been awarded.

Construction began in January. The units are expected to be completed before July.

This is the first of four contracts involving construction of Navy housing in Japan. The others include 130 units at Atsugi, 76 at Yokosuka and 21 at Iwakuni.

YESTERDAY'S NAVY

On 1 Feb 1942 the first carrier task force raid in the Pacific hit the Marshall and Gilbert Islands. Germany began unrestricted submarine warfare, 1 Feb 1917. USS *Maine* was sunk by an explosion in Havana Harbor on 15 Feb 1898. First regular U. S. Navy expedition put to sea commanded by Commodore Hopkins, 18 Feb 1776. USS *Hornet* captured the British ship *Peacock* off Demerara, British Guiana, 24 Feb 1813. Elizabeth City, N. C., was captured by an expedition under Commodore Rowan 10 Feb 1862. Congress first authorized Naval Hospitals 26 Feb 1811.

News of Navy Ships

Minecraft come and go so quietly that big ship sailors have a tendency to overlook their existence until a loose mine comes floating by or a spot of hot war forces some part of the world's coastal areas and navigable waters to be classed as "hostile." Like Faith, Hope and Charity, however, minecraft are still very much in evidence. For instance, there are the three new MSO hulls numbered 519, 520 and 521, and the names recently picked for them: ***Ability, Alacrity*** and ***Assurance.*** The three sweeps are a modification of the *Agile* class, with a length of 189 feet, a beam of 36 feet and a displacement of 936 tons. They are wooden-hulled, powered by non-magnetic diesels and have controllable-pitch propellers.

And elsewhere in the mine field:

- **USS *Dextrous*** (MSF 341), proud owner of 8 battle stars for World War II and five engagement stars for Korea, has been decommissioned.

First put in service back in June 1942, *Dextrous* went to the "Med," participated in the landings at Salerno and Anzio, and in the invasion of Southern France. Later she operated in the Pacific, mostly around Guam, Eniwetok and Okinawa, although she did participate in the pre-occupation sweep of waters around the enemy homeland. Ending her occupation duty in January 1946, *MSF 341* headed home for a spell in the Reserve Fleet before being recommissioned for three tours of duty in Korean waters.

- **USS *Acme*** (MSO 508) has joined the Fleet in formal ceremonies at Boothbay Harbor, Me. She incorporates the latest technical equipment for combating mines, as well as the newest designs for comfortable living afloat.

- Five vehicle landing ships have been taken from their LSV slot and placed in a new one marked MCS (Mine Warfare Command and Support Ship). The five: **USS *Catskill*** (MSC 1), ***Ozark*** (MSC 2), ***Osage*** (MSC 3), ***Saugus*** (MSC 4) and ***Monitor*** (MSC 5).

Then there are a number of minecraft which have been transferred to other navies under provisions of the Mutual Defense Assistance Program: Coastal minesweeper **MSC 261** has been turned over to the government of Pakistan in ceremonies at Boston Naval Shipyard. The wooden-hulled 180-footer, first vessel to be taken by Pakistan, will be renamed *Mujahid.* At San Diego **USS MSC 264** has been taken over by a crew of Danes; **USS MSC 266,** a coastal minesweeper, has been transferred to Spanish jurisdiction at Boston Naval Shipyard, while **MSOs 513** and **514** were accepted by the French government representative in Boston.

Turning from minecraft and working up the long line of Navy ships we find that:

- Commander Fleet Activities, Yokosuka, set up ceremonies on the activity's small boat float for the transfer to Japan of five LCVPs, one YSR and two LCMs.
- Also at Yokosuka, the Commander, Naval Forces, Far East, speaking at ceremonies transferring **LSMs 422, 471** and **478** to Nationalist China, said: "The transfer of three LSMs to the Navy of Nationalist China is not likely to rank as one of the great events of history—efficient and gallant little ships though they may be. What we do here today, however, has importance and significance far beyond mere number of the ships transferred, their monetary value or their combat capability."
- Auxiliary tugs **USS Chilula** (ATF 153) and **Avoyel** (ATF 150) have been taken out of the mothball fleet and recommissioned for service in the U. S. Coast Guard.
- At a launching down in Louisiana the wife of the Commandant, Eighth Naval District, reportedly "displayed excellent batting form" as sponsor of **USS Grant County** (LST 1174), a 442-footer which is believed to be the largest vessel ever launched on the Mississippi river.

EAST TO WEST—*USS John S. McCain* (DL 3) enters San Diego harbor to join *USS Wilkinson* (DL 5) in CruDesPac.

- Meanwhile, back at Boston Naval Shipyard **USS Suffolk County** (LST 1173) was also launched.
- **USS Sellstrom** (DER 255), recently recommissioned at New York Naval Shipyard, was once plain old DE 255, named for a Navy flier who lost his life early in World War II.
- **USS Courtney** (DE 1021) has been commissioned down in Charleston as newest member of the *Dealey*-class escort vessels. *Courtney,* in addition to being fitted with the latest in electronic and anti-submarine warfare gear, has the distinction of being the first vessel commissioned in Charleston in almost 10 years.
- A 1900-ton escort vessel, **USS Hartley** (DE 1029), has been launched in Philadelphia. *Hartley* is a 315-footer, with a beam of 36 feet.
- Contracts have been let for DEs 1035 and 1036, although no names have yet been chosen for them. Of the DE 1033 escort vessel class, the new ones are 1350-tonners, sporting a 38-foot beam and 312-foot length —in addition to the most modern anti-submarine weapons and sonar devices, excellent maneuverability and a low silhouette.
- **USS Forster** onetime DE 334, has been recommissioned at Long Beach Naval Shipyard as the radar picket escort vessel DER 334, following a period of conversion which called into use practically every trade to be found in the yard.
- Ex-destroyer escort **USS Vance** (DE 387) is back in the Fleet with what might be called a new "job code" number—DER 387.
- **USS Decatur** (DD 936), fourth of the name and a member of the *Forrest Sherman* class, has been placed in commission in Quincy, Mass.
- **USS Hollis** (APD 86) has been taken over by the zipper fleet at Green Cove Springs, Fla., after a record of service which dates back to her commissioning as a destroyer escort in 1944. After serving in the Mediterranean area with the *first* anti-submarine "hunter-killer" group in that area and as an escort for convoys, *Hollis* returned to the States in 1945, where the Philadelphia Navy Yard converted her into a high-speed personnel transport. Conversion completed, *Hollis* sailed for the Pacific and duty as flagship to a force of underwater demolition teams. Mothballed in 1946, she was recommissioned in 1951 to pull subsequent duty as a training vessel.

USS COMPASS ISLAND (EAG 153) makes a trial run. She will be used to evaluate new navigation gear.

In the submarine Navy, USS **Darter** (SS 576) has been launched up Connecticut way. Billed as "one of the quietest submarines of all times," *Darter* features sound-isolating compartments for her diesels, in addition to controls of the "joy stick" type, the last word in habitability features, and power enough for her to make as much speed underwater as her WW II namesake made on the surface.

The nation's seaward defenses will be strengthened during the first half of 1957 if current schedules are met in delivery of YAGRs 9, 10, 11 and 12—otherwise known as **Investigator, Outpost, Protector** and **Vigil.**

USS **Potomac** (AO 150), sister of Maumee (AO 149) and one of three, has been launched. She has a capacity of 190,000 barrels, pushed along at 18 knots by a single screw, steam turbine powered.

At the end of the line size-wise is notification of the name picked for the sixth *Forrestal*-class carrier—USS *Constellation* (CVA 64). Her keel is scheduled to be laid late this year.

Far out in the Pacific, at Apra Harbor, Guam, a craft of vastly different shape has been decommissioned—USS **AFDB 1,** usually billed as the "world's largest floating drydock." Originally commissioned in April 1943 as USS *ABSD 1*, the huge facility (927 feet long, with a 256-foot beam) served the Pacific Fleet as 10 separate sections until 1944 when it was assembled into a single 38,500-ton unit in order to service larger ships. Taken out of commission in the Philippines on 1 Jun 1946, the drydock was disassembled and towed to Pearl Harbor where her disjointed segments became a familiar sight to passing Navymen. She was recommissioned in June 1951 and towed away to Apra for another taste of active duty. During her two tours of service, *AFDB 1* has been used to repair a total of 71 ships, ranging from yard craft to the battleship USS *Wisconsin* (BB 64).

Finally, two Union ships of Civil War vintage have made headlines, with the one settling to the bottom unbidden and the other being discovered on the bottom as the result of a search which has gone on sporadically since Reconstruction days.

- USS **Cairo,** a 512-foot ironclad, has been found approximately 12 miles above Vicksburg on the bottom of Mississippi's Yazoo river. One of the first U. S. warships to be sunk by a mine, *Cairo* has lain in her muddy bed since late 1862. Union forces removed her smokestacks and other superstructure to keep Confederates from finding and salvaging the vessel, but modern-day magnetic equipment located the wreckage and skin divers helped identify it. According to a National Park Service historian the ship is in a fair state of preservation and salvage attempts are being considered.
- When USS **Hartford** sank at her berth in the Norfolk Naval Shipyard, a local newspaper accorded her an "obituary" which began: "The last surviving lady who fought in the Civil War died at a local shipyard early yesterday morning after a long illness. Death was due to untended wounds, old age and worms."

The 98-year-old *Hartford*—Admiral Farragut's flagship when he gave voice to that famous "Damn . . ." quotation at Mobile Bay—had depended for several years upon steady pumping to keep her afloat. Her loss is attributed to the failure of hoses which carried water from her leaky hull via the permanent pumps, plus the inability of specially-rigged pumps to stem the flow of water before *Hartford's* vitals were breached.

And that's about all the News of Navy Ships for this month.

Most Powerful Destroyer Type

USS *John S. McCain* (DL 3) has joined her sister ship USS *Wilkinson* (DL 5) as a unit of the Pacific Fleet's Cruiser-Destroyer Force. She will be based at San Diego as flagship of Destroyer Squadron 21.

McCain left Norfolk, Va., for her cruise to San Diego early last November, making stops at Panama, Buenaventura, Colombia and Callao, Peru. (See photo, page 37.)

Carrying a crew of about 300 (see ALL HANDS, October 1956 page 16), *McCain* is considered faster and far more powerful than any destroyer-type ship in the Navy. She boasts automatic loading, rapid-firing guns, controlled by the latest fire control, and rapid target acquisition equipment.

She also is equipped with Weapon Able, one of the most modern antisubmarine weapons.

Shipbuilders

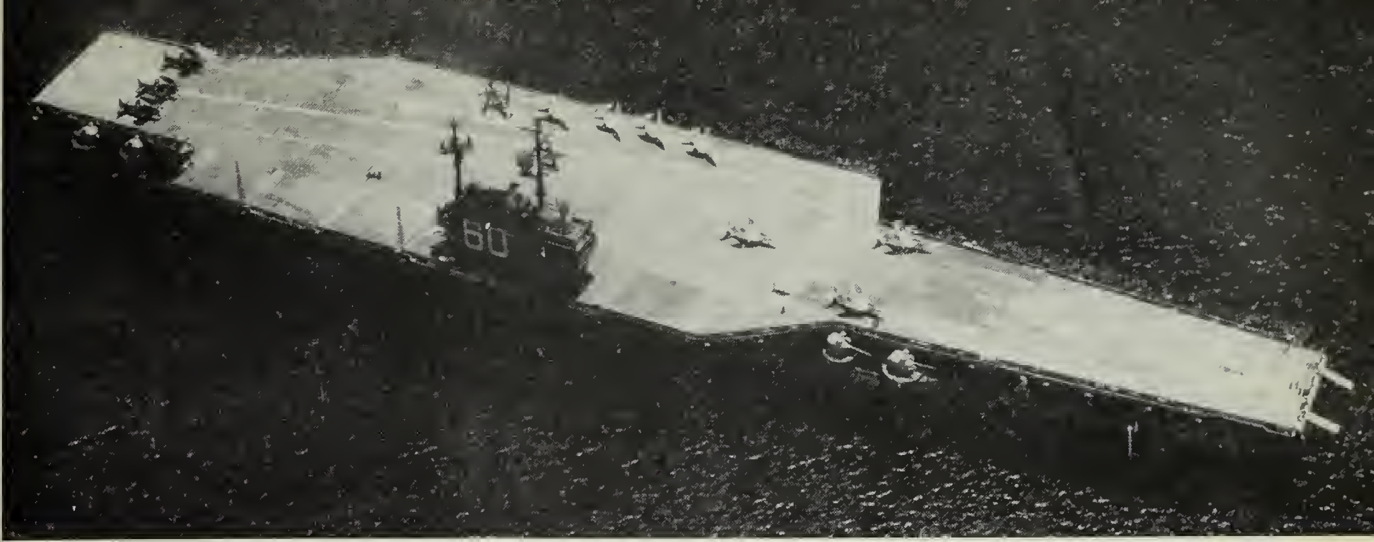
Not satisfied with some of the details of amphibious ships they've seen, two tradevmen Harry W. Carey, TD3, and Herbert W. Carder, TD3, have done something about it. They've built their own fleet.

The Navymen had no objections to the plans of actual landing vessels, but they did feel the models of these ships which are used by the Amphibious Training Unit at the Little Creek Naval Amphibious Base for instructional purposes, left something to be desired.

The fleet which they constructed is composed of 15 scale models. The models show the assault phase of an amphibious assault, beginning when the ships start their unloading operations until the Beach Group takes over.

Carder has also built a 14½-pound scale model tug, which he controls by radio. It has already proved its practical worth by sparing Carder the effort required to row his full-scale 12-foot dinghy.

BUILT THEIR OWN—Tradevmen H. W. Carey, TD3, USN, (rt) and H. W. Carder, TD3, USN, built a 15-ship amphib fleet for classes at Little Creek.



Down to DC in Ships

USS *Saratoga* (CVA 60) is plenty tough and mighty powerful.

To make sure she stays that way every officer and enlisted man in the crew has to be thoroughly trained for his role on her huge fighting team, and one of the most important aspects of that training is damage control.

Saratoga well knows the value of good DC organization, for in World War II it enabled her predecessor, CV-3, to stay afloat despite one of the most devastating kamikaze attacks ever sustained by any warship.

In the new *Saratoga*, as in the rest of the Fleet, the same sort of efficiency is being built up through repeated drills, so that in the event of collision, fire or battle damage every man will know what he's supposed to do and how he's supposed to do it.

Some (*right*) learn to assemble and use fog fire fighting equipment. Others (*lower left*) work in "DC Central" where reports from repair teams are collected, evaluated and plotted. "Central" in turn determines the condition of the ship and decides what measures should be taken to repair and isolate the damage.

Finally, when the simulated crisis is under control, the telephone talker in Central (*lower right*) passes the word and the repair parties are ordered to secure.

Next time, whether it's the real thing or only another drill, everyone on board will be better prepared for the emergency and the part he's to play in overcoming it.

Navy Olympic Stars Return with Seven Medals

The Olympic Games in Melbourne, Australia, dominated the mid-winter sports news and eight of 16 Navymen who were selected to the American team came back with Olympic championship medals. Leading the array of returning champions were Gold Medal winners Milt Campbell, SA USN, LTJG James Fifer, USNR, and ENS Dan Ayrault, USNR.

Campbell, now stationed at NTC San Diego, won the decathlon and set a new Olympic record on the way, missing out by only 49 points of surpassing the world mark. Campbell, who now joins the ranks of super-athletes like Bob Mathias and Jim Thorpe, broke Mathias' Olympic record set in 1952, when this same Campbell was runner-up.

As winner of the Decathlon, Campbell has been acclaimed as one of the outstanding heroes of the Games. This grueling 10-sport endurance test, includes the 100-meter dash, 400-meter run, 1500-meter run, 110-meter hurdles, shot put, high jump, broad jump, pole vault, discus and javelin.

The 10-event test, run over a period of two days, pits the world's greatest all-around track and field performers against each other.

Campbell took the point lead on the first contest and led throughout. He also led in the loss of bodyweight, for he dropped 10 pounds during the gruelling two-day competition.

Here Are the Navymen Who Made the Olympic Team

NAME	DUTY STATION	SPORT	AWARDS
LTJG Jack Davis, USNR	NTC San Diego	110-meter hurdles	Silver Medal
Milton Campbell, SA, USN	NTC San Diego	Decathlon	Gold Medal
Ben Garcia, SN, USN	NTC San Diego	Javelin	
Allen Bell, SN, USN	USS Wasp	Cycling	
LTJG Bill Andre, USNR	USNA Annapolis, Md.	Pentathlon	Silver Medal
Sewall Shurtz, YN3, USN	R/S Brooklyn, N. Y.	Fencing	
LTJG James Fifer, USNR	N/S Seattle, Wash.	Rowing	Gold Medal
ENS Dan Ayrault, USNR	N/S Seattle, Wash.	Rowing	Gold Medal
CHMACH Offut Pinion, USN	NAS Atlantic City	Pistol	Bronze Medal
Reid Patterson, SN, USNR	N/S Long Beach, Calif.	Swimming	
ENS Pete Blair, USN	USNA Annapolis, Md.	Wrestling	Bronze Medal
ENS F. Schoettle, USNR	R/S Newport, R.I.	Yachting	
ENS Robert Stinson, USN	N/S Newport, R.I.	Yachting	
NavCad Russell Dermond, USNR	NABTC, Pensacola, Fla.	Canoeing	
John Pagkos, ETSA, USNR	USNRTC Yonkers, N. Y.	Canoeing	
Hugh Wiley, SA, USNR	USNRTC Ft. McHenry, Md.	Equestrian	

In addition to the participants, there were a number of other Navymen who attended the Games in Melbourne in an official capacity. LCDR Charles B. Moore, USNR, of BuPers Special Services, was the Navy Department representative. LCDR Charles S. Swift, USN, of OpDevFor in Norfolk was appointed manager of the U. S. Olympic Wrestling team.

ENS Roger Bullard, of NAS Floyd Bennett Field, N. Y., was the manager of the Olympic Rowing Team champions from Yale University. The other Navyman selected to travel to Melbourne for the games was LCDR Josiah Henson, USN, of NAS Corpus Christi.

LTJG James Fifer, attached to Anti-Submarine Squadron 39 at NAS Quonset Point, R. I., teamed with a former Marine flyer, 1STLT Duvall Hecht, USMCR, to win the Gold Medal in the pairs without coxswain event.

The two airmen easily outdistanced their closest rivals to win first place. They had previously been rowing mates while attending Stanford University and avenged their defeat in this event in the 1952 Olympics.

Fifer, who is a pilot of a twin-engined S2F *Sentinel,* and Hecht pulled out in front at the start of the race and kept pulling away from the Russian, Austrian and Australian crews which had also qualified for the finals.

ENS Dan Ayrault of the Naval Station, Seattle, Wash., came home with an Olympic Gold Medal as he teamed with Kurt Seifert and Conn Findlay to win the paired oars with coxswain event. Ayrault also attended Stanford, where he was teammate of Seifert and Findlay.

One of the hairbreadth contests at the Olympics this year was a tough one to lose for LTJG Jack Davis, USNR, of NTC San Diego. In the 1952 Olympics, Jack had missed out by inches for winning the 110-meter hurdles. He had been shaded by

NICE GOING—Capt C. T. Caufield, USN, presents desk trophies to (left to right) Milton Campbell, SA, LTJG Jack Davis and Ben Garcia, SN.

Harrison Dillard, although both were given the identical times of 13.5 for the distance. Davis came away with a second place Silver Medal.

This was to be his year, Davis hoped. In the 1956 AAU championships, he had set a new world record of 13.4 for this event, although he failed to win in the final heat. In the American Olympic Trials in Los Angeles, he finished up in a dead heat in the finals of the 110 hurdles—a dead heat with the troublesome but capable Lee Calhoun. Both qualified for the Olympics.

Came the day of reckoning at the Olympics and Davis was ready. He knew that the slightest mistake and Calhoun would be winner. Once again, for Davis, it was not to be. Somehow or other, he got a poor start out of the blocks and although he was able to equal Calhoun by the time they cleared the fifth hurdle, Davis couldn't pass his chief opponent.

Both runners checked at 13.5 seconds but it took a photo-timer to separate the two great hurdlers. It was again only a matter of inches, but Navy's Jack Davis has his second Silver Medal.

Chief Machinist Offutt Pinion, USN, of NAS Atlantic City, N. J., came through in the International Free Pistol shooting event to win third place and a bronze medal. The veteran Navy pistol expert reached the zenith of his avocation this past year as he won the International Free Pistol shooting contest in the Nationals at Camp Perry. Then he followed this up with the cream of all shooting laurels, an Olympic Medal.

Schedule of 1957 All-Navy and Regional Championships

SPORT	REGIONAL (week of)	ALL-NAVY (week of)	*TEAM/SQUAD	RULES
Boxing	25 Feb	4 March Host—Com 1	12—one man each weight class	AAU—Single Elimination, with headgear
Basketball	11 March	18 March Host—Com 5	12—Both men and women	Men—AAU Women—NSGWS Double Elimination
Bowling	1 April	8 April Host—Com 12	4—Both men and women	ABC—Singles Doubles and Team, all 5 games each
Tennis	5 August	12 August Host—Com 11	Seniors—2 Open—4 Seniors over age 40—1 August	USLTA Single elimination Best 2 until semi-finals Then best 3. Seniors—2 singles 1 double Open—4 singles 2 doubles
Golf	5 August	12 August Host—Com 6	Men—4 Open 2 Seniors Women—4 Open Seniors over age 45—1 August	USGA 72 hole medal play
Baseball	19 August	26 August Host—USCG Cape May, N. J.	18	Accepted professional rules, double elimination
Softball	26 August	2 September Host—CinCLantFlt	Men—16 Women—16	A.S.A. Double Elimination

LTJG Bill Andre, USNR, of the Naval Academy, won a Silver Medal as a member of the U. S. Modern Pentathlon Team which won second place. Andre, who also qualified for the American team in the Fencing events, was number one man on the U. S. Pentathlon team, finishing sixth in individual tabulations.

'COOL' GOLFER, CWO W.C. Crews, USN, of *USS Atka* (AGB 3) practices 'Arctic golfing' while his ship waits for ice break on DEW Line supply mission.

An upset for Navy came when ENS Pete Blair, USN, of the Naval Academy, won only third place and a Bronze Medal in the 191-lb class free-style wrestling. Blair had already defeated the wrestler from Turkey who had been heavily favored to win the class. Blair, in his semi-final bout, was pinned by the eventual winner. Blair did come back, however, to win the consolation bout and take third place.

The Marines, who are now competing within their own ranks (the Marine Corps was formerly included in the Navy Sports Program), qualified eight men for the Olympic team and five returned with medals.

1STLT Duvall Hecht teamed with Navyman Jim Fifer to win the rowing. 2NDLT Thomas J. Charlton, of MCS, Quantico, Va., also won a Gold Medal as a member of the title-winning 8-oared shell from Yale University.

The two Silver Medals were won by the Marine twins, SGT John D. McKinlay of Camp Lejeune, N. C., and PFC Arthur F. McKinlay, of MCRD San Diego. The twin rowers

JIM STANLEY, SN, USN, shows form that placed him on Navy All-Stars as he lays one up for Hawaii Packers in Western All-Navy tilt against 12th Naval District.

came in second in the four oars without coxswain event.

A Bronze Medal was won by Private Joshua Culbreath, of MCS Quantico, who won third place in the 400-meter hurdles.

★ ★ ★

No Wave athletes were selected to the Olympic team but two Navy dependents were members of the women's swimming team. Mary Jane Sears, daughter of Rear Admiral Harry E. Sears, USN, competed in the 200-meter breast stroke and 100-meter butterfly events. The other was Susan Gray, duaghter of Captain James S. Gray, USN, who competed in the 400-meter freestyle.

★ ★ ★

The din of the Olympics is still echoing, yet basketball has gained the attention of many sports followers. Thorughout the Navy today, some 2000 baskeball teams are in the battle for league and district titles. Each is secretly—and some are openly—eyeing the All-Navy title up for grabs next March.

You might think that every team has an equal chance for the title. But in the case of basketball, ships don't have quite the same facilities for training as shore activities, although they'll be in there dribbling.

This year, as in years past, there will probably be about a dozen teams throughout the Navy with a fair chance of gathering all the marbles. The fact that most of the top Navy quintets emerge from activities with large complements is not, in itself, a good reason for their success from season to season. Naturally, their chance of getting good material through normal personnel transfers is much greater than that of smaller ships and stations. Training centers are in an ideal position to get A-1 material as it comes into the Navy. But in the last analysis, the big reason for the success of the winning teams—whether from a big or small outfit—is simply: They try hard.

They try hard to get good players, try hard to find the best coaches, and try hard to get their athletes in the best possible physical condition. They also try hard to build up enthusiasm and interest among their own personnel.

All-Navy Sports Futures

This year's All-Navy championships present a "new look" in the Navy sports program and reflect the ideas and desires of what the commanders/commandants want in the way of sports. (See box, page 41.)

The scope of this year's contest has been enlarged to seven sports and includes championships for Waves in basketball, bowling, golf and softball. For the male athletes, All-Navy diadems up for grabs include the above four sports plus baseball, boxing and tennis.

The emphasis in the Navy sports program is again on the intramural level. However, competition and interest should remain as high as before in the All-Navy level.

Going out the window are the All-Navy Eastern and All-Navy Western championships. Under this year's setup, the Navy has been divided geographically into six regions. When a team wins a regional championship, it qualifies for a spot in the All-Navy championship playoffs in that particular sport. No team or individual, however, will be allowed to compete in more than one region in any one sport.

For Inter-Service competition, only three sports are on this year's agenda. Inter-Service competitions will be for men only and will include boxing, golf and tennis. Navy will host the Inter-Service boxing on 14-15 March at the Newport, R. I., Naval Station.

Host for Inter-Service golf will be the Marine Corps on 21-24 August with Parris Island as the tentative site. The Army will be host for the Inter-Service tennis competition on

20-24 August to be held in the District of Columbia area.

Before reaching the Inter-Service, each representative must win the championship of his respective service. For the Navy here's the path of elimination by regions:

Atlantic Fleet Region: All U. S. Atlantic Fleet units.

North Atlantic Region: First, Third, Fourth and Ninth Naval Districts, SRNC-PRNC and CinCNelm units.

South Atlantic Region: Fifth, Sixth, Eighth, Ninth, Tenth and Fifteenth Naval Districts.

North Pacific Region: Twelfth, Thirteenth and Seventeenth Naval Districts.

South Pacific Region: Eleventh Naval District and Pacific Fleet type commands with headquarters in the Eleventh Naval District.

Western Pacific Region: Fourteenth Naval District, Marianas, Far East, Philippines and Pacific Fleet type commands with headquarters in the Fourteenth Naval District.

Other outstanding changes brought about by this year's sports instruction include the matters of transportation and finances. From the time a team wins a regional championship, it will be under the financial wing of the BuPers Central Recreation Fund.

Full details may be found in BuPers Inst. 1710.ID.

Sharpshooter

Don Tuculet, AOAN, USN, of NAAS Saufley Field, Pensacola, Fla., fired his first pistol shot less than a year ago. No record is available to certify where his first round hit, but since then, Don has been on or close to the V. This is a matter of record because Tuculet picked up seven medals in the first two matches he entered.

In the Naval Air Basic Training Command Pistol and Rifle Club matches, Don won: First Place, Sharpshooter Class, .22 caliber, National Match Course; First Place, Sharpshooter Class, .45 Caliber, National Match Course; First Place, Sharpshooter Class, Center Fire, National Match Course; and Second Place, Expert class, Grand Aggregate.

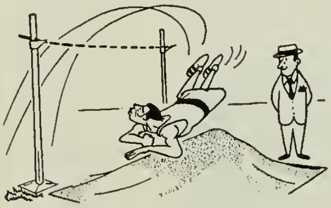
Tuculet added his other three medals at the Fiesta of Five Flags Championship Matches. Shooting in the Sharpshooter Class, Don won: Second Place, Center Fire, National Match Course; Second Place, Timed Fire; and Second Place, Slow Fire.

SIDELINE STRATEGY

THE LIGHT OF DAY was quickly fading. There was a sharp chill in the air. But not one of the 100,000 who jammed Melbourne's Cricket Ground was about to leave. It was the finale to one of the greatest one-man exhibitions of endurance, desire and ability they had ever witnessed.

The final event was the strength - sapping 1500 - meter run, the last of 10 events in two days by the world's greatest all-around athletes. The big (6'3", 215-lbs) athlete with the red, white and blue stripes across the front of his uniform had to run in a time of 4:55 or less to clinch the much desired Gold Medal.

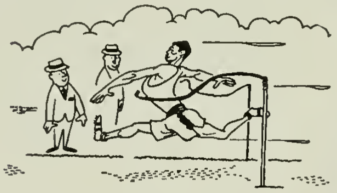
As he made the final turn into the home stretch, he lapped the Australian entry in the Decathlon. "Come on, you've got to go" the Australian urged Milt Campbell, SN, USN. And Campbell appeared to cut in all boilers as he sprinted the last 300 yards and won the event in 4:50.6, and the first place gold medal.



It was a dream come true to the young (22) Navyman from Plainfield, N. J. Four years ago he had failed to make the grade in the Decathlon. He had finished second to an ex-Marine from Tulare, Calif. That year, Bob Mathias had set a new Olympic record, but now even his record was by the boards. Big Milt Campbell nudged the mark up 50 points, to a total of 7935.

In every Olympiad, the winner of the Decathlon stands as one of the outstanding heroes of the games. In 1956, Campbell established his superiority over an exceptionally strong field of competitors.

Although he had not been the pre-Olympic favorite going into the events, Campbell's victory had not gone unpredicted. Campbell himself, while chatting with the Navy Representative at the Olympics, had quietly and confidently stated "I'm going to win the Decathlon." It was no idle boast by the athlete who has now been elevated to the ranks of such greats as Mathias and the late Jim Thorpe.



Many experts at the Olympiad (and certainly there were many) had stated that even if the favorite Rafer Johnson of UCLA had had one of his better days (he was hampered by a groin and leg injury) they doubted that he would have bettered the Navy seaman. From the first event, the 110-meter hurdles, Campbell led the field and his first place victory was in doubt only after he had failed to clear the pole vault bar at 11 ft. 5¾ in.

"It was my own fault," Campbell said later. "I didn't time myself properly on the approach and fouled up." But in the clutch, he proved himself the greatest all-around athlete in the world today.

—Rudy C. Garcia, JOC, USN.

SERVICESCOPE

Brief news items about other branches of the armed services.

LONG STEP—Copters are better to jump from according to paratroops who have been trying this new approach.

★ ★ ★

"Over-the-shoulder" bombing, a method for accurately hitting a target with atomic weapons while evading radar detection, is under development by the Air Force.

Officially called Low Altitude Bombing System, but better known as "toss bombing," the method differs from a regular bomb run in that the pilot lobs the bomb into the target in a loft shot.

Teams of F-84F *Thunderstreaks* and F-84F *Thunderjets* are experimenting with two types of toss bombing. Both methods allow a pilot to make a high-speed, tree-top-level approach to a target, drop his bomb and get away before his craft is enveloped in an atomic explosion.

The advantages of toss bombing are obvious: fast, low-flying aircraft cannot be tracked or picked up easily on enemy radar screens and are less liable to attack from missiles and intercepters. And the marksmanship of the ground-hugging airplane is much more accurate than that of a high-altitude bomber.

The "over-the-shoulder" method is used when the only identification point is the target itself. As the plane approaches the target at tree-top level, the pilot pulls it up in a loop and while still climbing, tosses the bomb "over his shoulder" at the target behind. The bomb arcs above the plane while the pilot completes the loop and streaks off, to be miles away when the bomb explodes.

OFF AND FLYING — Formation of *Super Sabres* becomes airborne together as USAF precision team takes off.

This approach is favored by pilots of fighter-bombers such as the *Thunderstreak* because of the type of target most frequently encountered in tactical bombing missions. Fighter-bombers are used primarily to hit major tactical targets such as railroad yards, bridges, dams, airfields, or for front-line air support. Over-the-shoulder bombing allows the pilot to get a good look at his target before dropping his bomb.

★ ★ ★

What is said to be the largest static firing test stand for rocket motors in the United States—and possibly the world—has been announced by the Army.

The test facility at Redstone Arsenal, Ala., started two and one-half years ago, cost a total of $12,000,000, and will be capable of testing the intermediate range ballistic missile now being developed at Redstone. It may also test even more powerful missiles.

Static testing of a missile consists of locking the missile into place on the stand and firing it. The missile does not take off but as it strains against the grip of the tower its engine can be studied for performance characteristics as if it were actually in flight.

The test stand itself is only a part of the entire test facility, being surrounded by a complicated layout of other buildings and devices including a boiler plant, a booster water pump station, an engine building, a nitrogen booster station, a horizontal test stand, a components test laboratory, a cold calibration test stand, and storage area. A huge crane, with 90,000-pound capacity. is used to lift the test missiles into place on the stand.

★ ★ ★

Instead of the standard 75mm blank shells which have been used to announce retreat and reveille, the Army is using at 10 installations an adapter which will permit firing standard 10-gauge shotgun shells.

In addition to the $25,000 saved annually, the shotgun shells have the advantage of greater safety in handling and will require less storage space.

★ ★ ★

The first nonstop transcontinental helicopter flight has been completed by an Army H-21.

The feat was made possible by a series of in-flight refuelings at various points along the 2610-mile route. During its transcontinental hop the Vertol H-21 was refueled in flight four times by a U-1A fixed-wing plane.

In addition, the H-21 was twice refuelled from ground stations as it hovered above the ground. These were made at El Paso, Tex, and Shreveport, La.

The 32-hour flight was made to prove the practicability of ferrying helicopters as far as 3000 miles to bolster the striking power and mobility of ground forces.

At the same time, the Army claimed to have made the first successful aerial refueling of a helicopter on 14 August at Fort Rucker, Ala.

During the in-flight refuelings, the tanker A-1A reeled out about 200 feet of aviation fuel hose which was linked to the copter as it flew slightly behind and slightly to one side. The trailing hose was supported by a small parachute.

Under normal conditions, an H-21 helicopter has a range of about 200 miles. Use of the new in-flight refueling system extends its range nearly nine times.

★ ★ ★

A ONE-SHOT LIGHTWEIGHT flame thrower is now in the final stages of development by the Army Chemical Corps.

The unit, developed for use in close-range combat situations such as were encountered during World War II and the fighting in Korea, weighs 26 pounds when combat-loaded as compared with the 72-pound weight of the multiple-shot model. Because of its lighter weight and compact size, it can be "jumped" with a paratrooper as part of his equipment.

The new type of flame thrower is considered to be particularly useful for reduction of bunkers and other positions where high explosives are not effective. When equipped with a remote-firing device, it has been found to be ideal for use in defensive situations such as flank emplacement. It may also be adapted for use as a booby trap.

Either thickened or unthickened fuel may be used. Fuel capacity is two gallons, as compared with four and a half gallons for the multiple-shot type. Compact and easy to carry, the unit may be fired from any position. It is rugged, waterproof and safe to use.

★ ★ ★

A "RAPID-FIRING," six-barreled 20mm cannon for supersonic jet planes, patterned after the Civil War Gatling gun, has been demonstrated by the Air Force.

Named after Vulcan, Roman god of fire, the cannon was developed to meet Air Force needs for a weapon with sufficient rate of fire for modern jet aircraft which move at tremendous speeds against equally fast-moving targets.

It fires a projectile weighing one-third of a pound and each round is fired independently, with "duds" being ejected automatically.

Now being tested in Air Force jets, the 300-pound cannon is simple to operate and maintain.

★ ★ ★

A TWO-WAY RADIO which the Army Signal Corps has built into a new synthetic combat helmet will enable soldiers to communicate on the battlefield with great ease.

The radio weighs a pound, including batteries, and has a microphone that tucks into the helmet when not in use. The entire set is smaller than two packs of cigarettes.

The experimental helmet, molded of a new tough synthetic material, looks like a football player's headgear and protects the head as well as a steel helmet would.

The radio, using transistors instead of bulky vacuum tubes, is pre-set for short-range conversations to prevent message interception in the front line. However, the range can be increased in a few seconds by hooking an auxiliary antenna to the helmet. At full capacity, the new radio can reach other sets up to a mile away and can hear powerful stations at even greater distances.

BOTTOMS UP — The Air Force's precision flying team loop *Super Sabres* to demonstrate jet's maneuverability.

To answer a call the soldier pushes a button on the side of his helmet and talks into a microphone about the size of his thumb. No warm-up time is needed since the transistors act instantly.

Where talking might divulge his position, the wearer can push a second button on his helmet and acknowledge a message with a short "beep."

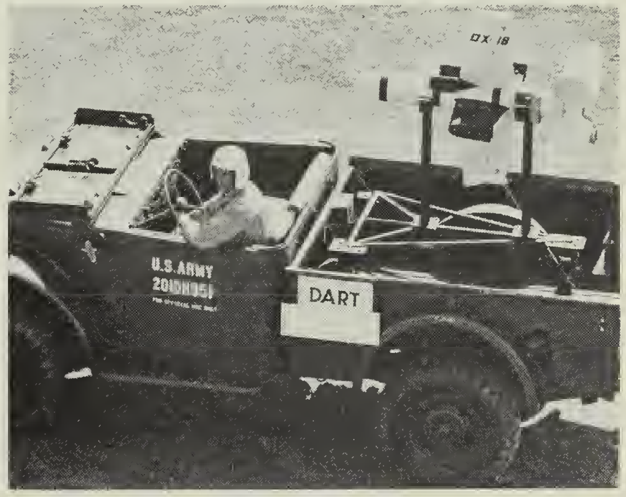
The FM set, which can operate continuously for a half-day without changing the tiny batteries, snaps into the side of the helmet in two metal cases.

Production models of the new electronic headgear are expected to be practically indestructible.

★ ★ ★

THE AIR FORCE is developing mammoth vacuum cleaners to clean the surface of its runways. The machine is capable of cleaning a million square feet of runway an hour while traveling at a speed of 20 mph.

It is expected that this equipment will help reduce the damage done to jet engines when foreign objects enter them from airfield pavement surfaces.



ANTI-TANK *DART* — Army's missile *Dart*, designed to knock out tanks, will be used by infantry armored units.

THE WORD

Frank, Authentic Advance Information On Policy—Straight From Headquarters

• **NO ACKNOWLEDGMENTS**—You will no longer get individual acknowledgments that your request for recruiting duty has been received. In other words, no news will be good news. If you don't hear anything, it means that your request has been received and that you are on the recruiting duty eligibility list.

The only time that you'll hear from the Bureau concerning your request for recruiting duty will be where there is wrong information on your request or when you do not meet the eligibility requirements.

Another good tip on submitting your request for recruiting duty: Don't limit yourself to a single city. Your chances will be a lot better if you will list a first and second choice and a third choice as "anywhere U. S."

• **RETIRED GUIDE BOOK** — Distribution of a guide book for retired and Fleet Reserve personnel in a pay status began in January. The new publication sets forth your rights, privileges and benefits, as well as those of your dependents and survivors.

Designated as NavPers 15891, the "Navy Guide for Retired and Fleet Reserve Personnel" will be automatically distributed by the Bureau of Naval Personnel to all individuals in a pay status on the retired rolls, to individuals retiring or transferring to the Fleet Reserve when orders are issued, and to ships and stations for administrative use.

Additional copies may be requested from the Chief of Naval Personnel (Attn: Pers G224). However, justification must be made for the additional copies.

• **E-4 EXAMS IN MAY** — Certain Regular Navy and Reserve personnel on active duty will have a chance to take service-wide competitive examinations on 2 May 1957 for advancement to pay grade E-4. Those who may take the exams are: (1) men who are eligible for the February examination but who did not compete for some reason; and (2) those who have newly become eligible in accordance with the criteria set forth in BuPers Inst. 1418.7C, BuPers Inst. 1414.3A, and the *Manual of Qualifications for Advancement in Rating* (NavPers 18068), as amended.

It should be noted that performance tests must be successfully completed before the examination date. Air controlmen who are not assigned to control tower duties are granted a waiver of the CAA certificate requirement.

The May exams will not be administered to TAR personnel. Regular Navy personnel who compete for advancement in those ratings in which selective emergency service rates have been activated will be recommended for and advanced only to the selective emergency service rates. Those examined in pay grade E-4 of other ratings will be advanced in the general service rates. Reserve personnel on active duty with the Regular Navy will be advanced to the related emergency service rating which is in their normal path of advancement and for which they have been trained.

Ratings for which the E-4 examination will be given are: ACW, ACR, ACT, GS, CT, AQB, AQF, GF, QM, SM, RD, RM, MR, ME, BT, IC, CE, AMS, AMH, ATR, ATS, ATN, AEM, AEI, PRS, PRM, MM, EM, ETR, ETN, ETS, FTM, FTU, FTA, FTL, FTE, SO and TM.

Requests for examinations must reach the Naval Examining Center on or before 15 Mar 1957, according to BuPers Notice 1418.

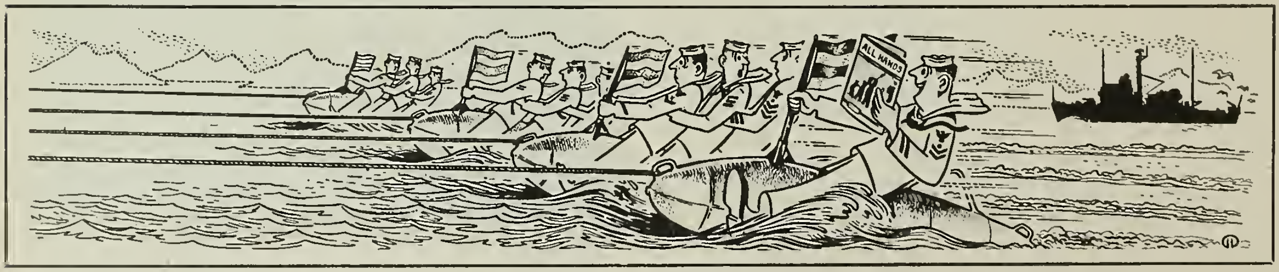
• **WANT TO BE A MUSICIAN?**—If you have had training and previous experience in playing a musical instrument and want to become a Navy musician, you may apply for entrance to the Naval School of Music. All enlisted men, except petty officers in the ratings of QM, RD, GS, FT, ET, RM, CT, DM, MM, MR, EM, IC, CE, BU, UT, AT, AQ, GF, AC, AE, and PR, are eligible to submit a request if they can meet the basic requirements.

As an applicant, you must take a musical audition administered by a Bandmaster, Chief Musician, or other competent musical authority. You must demonstrate technical proficiency on your chosen instrument, ability to sight-read, and produce the characteristic musical tone of the instrument throughout its range.

Applications for the Class A course at the Naval Music School must be submitted on the Enlisted Evaluation Report to the Chief of Naval Personnel. Your request must also include a completed Inservice Music Application Form (NavPers 759), which may be obtained from the leader of any Navy band or the OiC Naval School of Music.

If your request is accepted, you will be ordered to the U.S. Naval School of Music, Washington, D.C., with a possibility of future advancement in the Musician rating after successful completion of the school.

It is important that you note that once you're accepted into the school, you must have or obligate yourself to three years' active duty. The



REMEMBER—Keep this issue floating around until nine other readers have had a chance to see it.

Basic Course, which convenes monthly, qualifies personnel as playing members of unit bands. The course of instruction lasts from 26 to 36 weeks.

Included in the curriculum of the Class A basic course is training in concert band, dance band, harmony, ear training, seaman training course, general training course and private instrumental instruction.

The Naval School of Music also has an advanced Class B School and a refresher course Class C-1 School. The Class B School is to train qualified Musicians first class for advancement to Chief Musicians and as leaders of unit bands. The Class C-1 school is open to qualified senior petty officers in the Musician rating. This course gives the students remedial training, improves their instrumental proficiency and gives them additional theoretical instruction.

The method to use in applying for a course of instruction at the Naval School of Music and information regarding the courses may be found in BuPers Inst. 1336.2B.

- **NAVY UNIT COMMENDATION INSIGNIA**—Navy and Marine Corps units, ships and aircraft which have been awarded a Navy Unit Commendation are now authorized to display a distinctive pennant, plaque or streamer.

The burgee pennant will measure 44 units on the hoist by 92 units on the fly. It will have seven horizontal stripes, with hunter green as the center stripe. From top to center, the stripes will be royal blue, Spanish yellow and scarlet, with the same color arrangement below the green stripe.

The bronze plaque, for ships, aircraft, tank units and the like, will be of appropriate size and will have the NUC insignia centered in the upper part and the citation engraved below it. Individual aircraft and tanks may also have the design painted on it in an appropriate spot.

For companies, battalions, regiments and similar organizations awarded the NUC, a streamer of appropriate size with the citation engraved on the standard has been authorized. Should a unit receive more than one NUC, one bronze star may be added for each additional citation, up to a total of five. The stars will be displayed on the center green stripe of the insignia.

When these pennants, plaques and streamers become available for distribution, the Bureau of Ships will publish information as to the method of obtaining them. Complete information on the establishment of the Navy Unit Commendation insignia may be found in SecNav Inst. 10520.1.

- **RESERVE AVIATORS**—A new Retention and Recall section (Pers B15r) has been established in the Aviation Liaison Branch of the Bureau. One major purpose of the new section is to deal with problems arising from the uneven distribution (by grade and seniority) of officers on active duty.

One effect of this unevenness (caused by expansion and contraction incident to WW II and Korea) is a shortage of officers beginning with the year group 1948. This shortage offers Naval Reserve officers in grades up through lieutenant (with date of rank for the lieutenant not earlier than 1 Jul 1953) an opportunity to return to active duty with enhanced prospects for promotion, special training and indefinite retention on active duty.

In addition, national policy requirements made it necessary for large numbers of young Reserve officers to be retained on active duty after completing their original obligated service. Opportunities for these officers also include improved opportunities for promotion, special training and indefinite retention on active duty.

The Chief of Naval Personnel will provide current, factual information on every facet of these opportunities to commands, groups, or individual officers, while encouraging and assisting interested officers to return to or remain on active duty.

Persons or groups desiring information on either program may write to the Chief of Naval Personnel (Attn: Pers B15r), Navy Department, Washington 25, D. C.

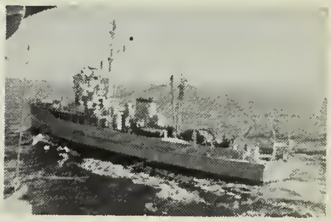
- **MSC APPLICATIONS**—A revised time table has been set up in BuPers Inst. 1120.15B for processing applications for appointment to the grade of ensign (2300) in the Supply and Administration Section of the Regular Navy's Medical Service Corps. In the new instruction, the dates for each step of the application process have been set forward approximately one month. The initial request must now be submitted by 1 November; the previous deadline was 1 December.

QUIZ AWEIGH

Start the new year out right and score a 4.0 in this relatively easy quiz. If you're a constant reader of ALL HANDS, and we assume you are, this month's quiz should prove no puzzler to you. In case you do run into trouble, turn to page 54 for some help.

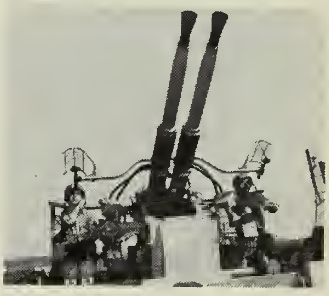
1. This ship is USS *Haverfield*. She is designated a DER which means she is (a) rocket destroyer (b) destroyer escort (c) radar picket escort vessel.

2. *Haverfield* is assigned to the U.S. Naval forces in the (a) Continental Air Defense Command (b) U.N. Blockading Forces in Korea (c) Rhine River Patrol.



3. Look closely. Is this ship a (a) submarine chaser (b) patrol frigate (c) minesweeper?

4. Ships of this type are usually named after (a) Indian tribes (b) lakes and rivers (c) birds.



5. The gun that these two crew members help to man is a (a) 40mm antiaircraft gun (b) 3"/50 rapid fire twin mount (c) 20mm twin mount anti-tank gun.

6. As in every gun crew, each man has a specific job. These men are, left to right, (a) pointer and trainer (b) trainer and pointer (c) loader and aimer.

You'll find the answers to this month's quiz on page 54.

THE BULLETIN BOARD

This Is Your Big Chance to Get into the Nucleonic Navy

Developments in the new navy are such that careers with well-nigh unlimited opportunities are opening up for many enlisted Navymen. Three nuclear power programs — nuclear powered submarines; nuclear powered ships; and Army package power reactor — for which qualified naval personnel may volunteer for training and duty, are now available.

The shipbuilding programs for nuclear powered submarines are continuing and the programs for nuclear powered surface ships are just commencing. These shipbuilding programs are expected to continue until a majority of the Navy's combatant ships will have nuclear powered propulsion plants.

Training in nuclear power plant theory and operations is required of all those assigned to the engineering departments in nuclear powered surface ships and subs.

As a result, enlisted men selected for duty in the engineering departments will receive a course of instruction in nuclear power plant operation of approximately one year in length before assignment to nuclear power plants.

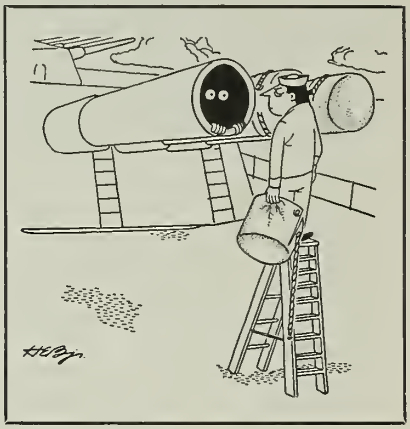
The development of the Army package power reactor has just started and the Navy is participating in the program.

As stated earlier (SecNav Inst. 1000.3), individuals chosen for these programs will not only be given every opportunity for advancement, but also will "have enhanced their career opportunities."

Here are the eligibility requirements:

Submarine—Regular Navymen in MM, EN, ET, EM and IC ratings in pay grades E-3 through E-7 and HM in E-6 and E-7 only may qualify if they:

- Have four years' obligated service.
- Are designated as "qualified in submarines."
- Are physically qualified for submarine duty.
- Volunteer for the program.
- Are less than 30 years of age.
- Have a combined ARI/MECH of 105.
- Are high school graduates (or have GED equivalent).
- Have a clear record.



Surface—Regular Navymen of the HM rating in pay grades E-6 and E-7, or of MM, BT, FP, MR, ET, IC, EM and IM ratings in pay grades E-3 through E-7, may qualify if they:

- Are less than 30 years of age.
- Are volunteers for the program.
- Have a minimum test score in GCT, ARI and MAT/MECH of 55 each.
- Are high school graduates.
- Are recommended by their commanding officers.
- Have a minimum of four years' obligated service, or be willing to extend their enlistment, or reenlist at the time of reporting for instruction.

If qualified for nuclear powered subs, you may submit your request on NavPers form 1339, Enlisted Evaluation Report, via your commanding officer, directly to the Chief of Naval Personnel (Attn: Pers B2131). The best qualified individuals are selected on their records.

Nominations of qualified volunteers for the nuclear powered surface ships are requested by the Chief of Naval Personnel from the Service Force Commanders as required. Individual requests should be submitted in accordance with the directives of the Service Force Commanders.

Nomination and selection procedures have not yet been formalized for the Army Package Power Plant Program.

Training for submarine personnel is divided into two phases, basic and operational. The basic nuclear power course is conducted at the Naval Submarine School, New London, Conn., and is 21 weeks long for all ratings.

Here, you receive a broad academic background in subjects related to the nuclear field and a knowledge of nuclear power plant construction, instrumentation, designed operation, and mechanical and electrical components.

The operational nuclear power course is conducted at Idaho Falls, Idaho, and Schenectady, N. Y., and this course is approximately 24 weeks long.

During this period you apply the knowledge received in the basic course and, by practical operating experience, qualify for the duties to which you will be assigned. Your ultimate duty assignment determines which course you will attend.

Training for surface ship personnel is also divided into basic and operational phases.

Both courses will be held at Idaho Falls with instruction provided by contract engineers and naval personnel of the staff of the Naval Nuclear Power Training Unit. The scope of the instruction is the same as that for submarine personnel.

Training for Army Package Power Reactors has not yet been fully developed but it is expected that it will follow lines similar to those described above.

Each course will offer approximately six months of theoretical training followed by approximately six months of operational and maintenance training either at land prototypes or on board nuclear powered ships.

Most of this training will be in a new and technical field and will involve much out-of-rating, or cross-rating work. In recognition of this situation, it is planned to provide special examinations for advancement in rating, based partially on the qualifications acquired in nuclear power and partially on the qualifications required in the rating held.

The examination period during which these special exams will be first provided will be announced as soon as the necessary examination material has been compiled.

Certain qualified men, primarily in the EN, MM and FP ratings, will also receive highly specialized stainless steel welding training.

Complete details, including recommended study texts and courses, may be found in BuPers Inst. 1540.33. The instruction also notes that experience to date has shown that a high GCT is not necessarily the most important requirement. Rather, it is the sincere desire to absorb the necessary fundamentals, the adaptability to new concepts of nuclear power, and the willingness to work that will insure success.

List of New Motion Pictures Scheduled for Distribution To Ships and Overseas Bases

The latest list of 16-mm. feature movies available from the Navy Motion Picture Service, Bldg. 311, Naval Base, Brooklyn 1, N. Y., is published here for the convenience of ships and overseas bases. The title of each picture is followed by the program number.

Those in color are designated by (C) and those in wide-screen processes by (WS). Distribution began in December.

These films are leased from the movie industry and distributed free to ships and most overseas activities under the Fleet Motion Picture Plan.

The LT Wore Skirts (674) (C) (WS): Comedy Drama; Tom Ewell, Sheree North.

The First Traveling Saleslady (675) (C): Comedy Drama; Ginger Rogers, Barry Nelson.

Storm Center (676): Drama; Bette Davis, Kim Hunter.

Yaqui Drums (677): Western; Rod Cameron, Mary Castle.

Santiago (678) (C): Drama; Alan Ladd, Rosanna Podesta.

The Maverick Queen (679) (C) (WS): Drama; Barbara Stanwyck, Barry Sullivan.

Abdullah's Harem (680) (C): Comedy Drama; Gregory Ratoff, Kay Kendall.

Footsteps in the Night (681): Drama; Bill Elliott, Eleanore Tanin.

Calling Homicide (682): Drama; Bill Elliott, Kathleen Case.

Somebody up There Likes Me (683): Drama; Paul Newman, Pier Angeli.

Pillars of the Sky (684) (C) (WS): Drama; Jeff Chandler, Dorothy Malone.

The Young Guns (685): Western; Russ Tamblyn, Gloria Talbot.

The Black Sleep (686): Horror; Basil Rathbone, Akim Tamiroff.

The Three Outlaws (687): Western; Neville Brand, Alan Hale.

Run for the Sun (688) (C): Drama; Richard Widmark.

Walk the Proud Land (689) (C) (WS): Adventure Drama; Audie Murphy, Pat Crowley.

A Cry in the Night (690): Drama; Edmond O'Brien, Brian Donlevy.

Davy Crockett and the River Pirates (691) (C): Adventure Drama; Fess Parker, Buddy Ebsen.

Seven Men from Now (692) (C): Drama; Randolph Scott, Gail Russell.

These Wilder Years (693): Drama; Cagney, Barbara Stanwyck.

Navymen Commended for Nighttime Rescue at Sea

Two Navymen on board USS *Requin* (SSR 481) were recently presented the Navy Commendation Ribbon with Metal Pendant. The awards recognized the heroism displayed by William P. Schlosser, CS3, USN, and Dallas R. Pendergraph, ET1, USN, for their parts in a nighttime rescue at sea last year.

The story of their exploit is told in the following citation signed by Secretary of the Navy Thomas: "Approximately 12 miles off the coast of Bermuda, as members of USS *Requin* maneuvered the submarine to recover six members of a swamped Royal Canadian Navy pulling whale boat, Schlosser and Pendergraph, despite the personal risk involved, dived into the choppy seas and swam a distance of approximately 50 yards to take a line to the six men. After aiding the six men to the side of the ship, they shielded them during the recovery from being pounded against the side by the swells."

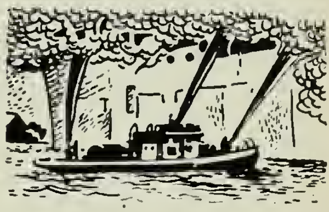
HERE'S YOUR NAVY

Not only is every Navyman a firefighter (as pointed out in ALL HANDS, November 1956) but every Navy ship is a floating fire department.

"Today's Navy of tomorrow" boasts of more than 180 different types of ships or service craft. Although they range in variety from super aircraft carriers to sludge-removal barges, they all have something in common. Every Navy ship or service craft, regardless of its size, shape or mission, is equipped with fire fighting equipment.

None will equal the maneuverability or fire fighting punch, however, of the Navy's family of tugs.

All combatant ships and auxiliaries are equipped with highly efficient fire fighting apparatus for their own protection. Such is not the case with the tugs—the fire engines of our Fleet and harbors. Equipment aboard the various types of Navy tugs is primarily for fighting waterfront fires and to assist other ships in fire fighting.



Typical of these floating fire engines is YTB-254. She's *Menatonon*, built in 1944. She's made entirely of wood and has teakwood decks. The largest of all tugs operated by the Navy's Port Control Office at San Diego, *Menatonon* is 110 feet long, has a beam of 29 feet and draws 13 feet of water. (Most YTBs displace 237 tons while the "254" displaces 415.)

She's the capital ship of all Navy and city waterfront fire fighting equipment in San Diego. The gear which gives YTB-254 this distinction is appropriately painted fire-engine-red in contrast with the drab gray which covers the rest of the large harbor tugs.

Her equipment consists of a gunlike "monitor" located on the tug's bow which is capable of discharging 4000 gallons per minute over 200 ft.

Going to Guam? This Is the Latest on Living Conditions

LET'S FACE IT. Guam is home only to "Guamanians." However, even if it isn't home to you, Guam can be good duty. It's no longer an isolated spot in the Pacific. There is plenty of activity for all tastes but, if you wish, it provides a good opportunity to improve your educational and cultural background in a spot relatively undisturbed by the outside world. Here's the straight scoop as reported by those on the scene.

Passports — Passports for your dependents are required, but before applying for a passport, dependents must have authorization for travel abroad. This authorization will be either in the form of the message permitting concurrent travel, or in the form of a letter issued by Commander Naval Forces Marianas before travel is authorized. To avoid delay in sailing, application for passport should be made as soon as this authority is received.

Passports, when issued, must be forwarded to the District Passenger Transportation Office, Twelfth Naval District, San Francisco, Calif., for delivery to your dependents just before sailing.

Housing—Lieutenant commanders and above are authorized concurrent travel and are assigned Navy housing upon their arrival on Guam. Officers below the rank of lieutenant commander, on the average, must wait four to six weeks after arrival before Navy housing is available.

Enlisted personnel of all grades or ratings have to wait, on the average, about four months after their arrival for Navy housing.

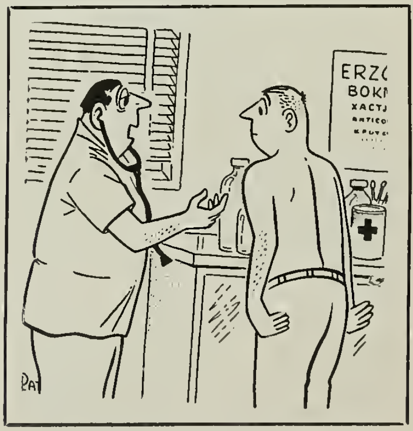
Navy clearance for entry of dependents is usually given approximately one month or more before they arrive. Housing units, mainly single and duplex dwellings of the Quonset wooden ranch house, or permanent concrete types are assigned as they become available.

Navy housing is furnished with "essentials" — beds, mattresses, chairs tables, divans, electric stoves, refrigerators, and in some cases deep freezers. Kitchen cabinets and "hot locker" (closet space) are adequate. Water heaters are provided for laundering and bathing. Bring your own washing machines and/or electric (not gas) driers if you have them.

"We feature the American Plan."

You will probably be more comfortable with your own furniture which will provide not only additional equipment for your home, but may release some items which could be used to outfit some other quarters for those who do not have their own equipment. Do not bring furniture of the antique or overstuffed variety. Other items that are susceptible to damage from excessive moisture and humidity should be left stateside. All types of electrical appliances will be most useful and should be brought along. An additional refrigerator would be most useful to the average family. Numerous items of household appliances and equipment are available at the Navy Exchange at prices which make it unnecessary to purchase electrical appliances which you do not own at the time of your departure for Guam.

All other types of household furnishings such as sheets, pillows (preferably foam-rubber), pillow-cases, towels, table cloths, linens, kitchenware, dishes, cutlery, and other items of personal equipment *MUST* be furnished by you. Light, electric power, sewage disposal, and water are provided with Navy housing. Phone service is also available at low monthly rates. If you occupy Navy housing you will be required to forfeit your housing (rental) allowances.



"Let's put it this way—if you were a ship, you'd be decommissioned."

A limited amount of privately owned housing is available. However, most of the houses are unfurnished or only partly so, and in general are substandard and overpriced. Rentals range from $40 to $150, with the majority at $75 and up.

Shipment of HHE and Automobile—The shipment of your automobile to Guam should be arranged as soon as you receive your orders. Submit a request for shipment (SandA Form 322) direct to the Naval Supply Center, Oakland, Calif. The shipment of your houshold effects can be arranged through the Supply Officer of any Navy or Marine Corps installation, preferably the one nearest your residence or last duty station. Government storage of houshold effects that you do not want to bring to Guam can be arranged at the same time. A complete request for shipment (SandA Form 34) together with certified copies of your orders will be required for each type of shipment. Certified copies of authority for entry of dependents are required for shipment of household effects to Guam.

Guam has a limited civilian transportation system at present, and a private car is most desirable. The Navy provides bus transportation for school children to and from school. Bus transportation is also provided between certain areas for armed forces personnel and civil service employees. Taxi service is available, but rates are high. It is possible to get along without a car on the island, but it is highly inconvenient.

Have your vehicle in tip-top mechanical condition before shipping. Undercoating is a very wise precaution. A good paint job will also help to keep the car more serviceable. Guam's humid climate and side roads are rough on cars. Body surfaces rust out rapidly if not cared for. Ignition and lighting circuits have a hard time because of the moisture and mildew. Mufflers and exhaust pipes frequently rust out.

Personal Effects — Remember, the personal type of household equipment *MUST* be provided by the occupant. Clothing, linens, kitchenware, dishes, cutlery, and such other personal items that you may need for immediate use in your new home should be brought along with you in your luggage and hold baggage. All other items of personal effects not needed immediately should be shipped as household effects.

Almost any article of household equipment and personal effects may be purchased on Guam at the various armed forces exchanges or the numerous civilian stores. Prices in the exchanges compare favorably with stateside costs and in some instances, especially luxury items, are lower. Travel light so far as cabin and hold baggage is concerned; bring the essentials and forget the extras.

Foods — Guam produces only a small quantity of meat and vegetables. However, ships equipped to carry refrigerated and frozen foods make frequent trips to Guam and bring in a fairly adequate supply of meats and vegetables as well as all staple products. Food prices, in general, average slightly higher than for most of the United States.

Schools — Education is compulsory for all youngsters between the ages of six and sixteen. School facilities and curricula below high school level compare favorably with the stateside school systems. High school facilities and curricula are somewhat below stateside standards, but are rated as adequate. There are both public and parochial schools covering all grades from the first through high school. Several kindergartens are operated for pre-school children.

The Guam Territorial College provides dependents as well as military personnel with an opportunity to obtain college credits in liberal arts, music and agricultural curricula. These credits are acceptable in some stateside colleges and universities.

Churches — Naval and Air Force chapels provide Protestant, Catholic and Jewish religious services for all military personnel and their dependents on Guam. Sunday schools, Bible classes and other religious activities are conducted regularly.

Medical and Dental Facilities—The Naval Hospital is a completely equipped and staffed facility. It is located in new, modern and permanent construction. Dispensaries are located at several of the larger installations on the island. These provide emergency treatment, and are staffed to care for minor ailments and ills which do not warrant hospital care. Ambulance service is provided when necessary. The Naval Dental Clinic can provide only emergency dental service to dependents.

There are civilian doctors, dentists, optometrists and oculists on the island. Their professional skills generally correspond to those that might be found in small communities in the States.

Clothing — For dependents, generally speaking, washable materials are the most practicable and desirable because of the warm climate. Excellent dry-cleaning facilities are available for non-washables.

For men, light summer suits for dress, slacks and sport shirts for casual wear are the order of the day. Summer tuxedos are worn occasionally. Don't bring heavy clothing or good woolen clothing.

For women, beach-type garb, slacks, blouses, shorts and shirts and sun-back dresses are used for everyday wear. There are many parties requiring the cocktail type dress. During the winter months, taffeta, laces and chiffons, are worn. If you have this type dress, be sure to bring it. During the summer, dressy cottons are suitable. Several formal dresses are useful, since there is an occasional formal dance at the Officers' and CPO's Messes (Open).

For the teen-agers and the younger fry, play suits, dungarees, sport shirts, cotton dresses, shorts, slacks, bathing suits, and trunks answer the clothing problem. There are many teen-age parties where party dresses are worn.

Shoes take a severe beating from

WHAT'S IN A NAME

Rockoon System

"Rockoons"—a combination of balloons and rockets—are used in addition to the Navy's famed *Skyhook* plastic balloons (see Jan 1956 ALL HANDS, P. 19) for probing the stratosphere.

The idea of combining the efforts of a *Skyhook* balloon with a small Deacon rocket was proposed by an ex-enlisted man, LCDR M. L. Lewis, USN, in 1949 during cosmic ray studies aboard USS *Norton Sound* (AVM 1).

The rockoon system, also referred to as "BATO" (balloon assisted take-off) was used for the first time during the Navy's polar tests in the summer of 1952.

The balloon lifts the rocket to altitudes above 70,000 feet and when it reaches a predetermined height, a fixed pressure switch fires the rocket from an almost vertical position. With the aerodynamic drag of the lower altitudes eliminated, the rocket achieves a near vacuum ballistic trajectory and attains altitudes in excess of those that can be reached by the same rockets when fired at sea level. Rockets launched by the rockoon method have gone up more than 60 miles while the same rocket fired at sea level reaches only 20 miles.

In recent months, 10 rockoon flights have been made in the Pacific from USS *Colonial* (LSD 18). These flights were made to investigate the effect of solar disturbances as a preliminary to the Navy's upper atmosphere research to be conducted during the International Geophysical Year.

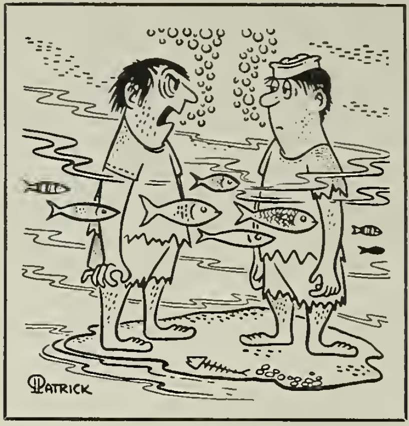
During these operations, *Colonial* served as the launching and observation ship while USS *Perkins* (DDR 877) was the support ship and tracked the rockoons by radar. These tests were highly successful and increased the Navy's general knowledge about a relatively little-known area—electromagnetic radiation of the sun caused by solar flares with a direct effect on radio communications.

the rainy season and the sharp-toothed coral. If practicable, women are advised to bring several pairs of their favorite shoes. However, shoes can be obtained in the armed forces exchanges and at the local civilian stores. Some of the smaller sizes for women and the fancy brands as well as shoes of the walking type with a medium heel are not always available. "Flats" and high heels can be purchased easily.

Mildew is hard on leather footgear, especially during the rainy season. Sandals and open-toed shoes are the most popular for women. Sneakers are fine for the young folks. Rubber, crepe and composition soles and heels provide the most wear. For the beach, swim shoes or sandals are smart. Sharp coral can cause nasty scratches, cuts and bruises.

Rain gear is also needed; light plastic material is recommended. Bring your own if you have it, but any suitable type can be obtained on Guam.

Other than clothing needed for the trip to San Francisco and for the first few days at sea after leaving San Francisco, all of your heavier clothing and woolens, as well as furs, should be stored before your departure.



"All the islands in the Pacific and you pick a submerged one!"

Recreation — The Armed Forces Golf Course is a well tended modern course of 18 holes. It is operated as a recreation facility for military and civil service personnel and their dependents. There are also a 9-hole pitch and putt course and driving range.

Except for winter sports, you can find almost every sport imaginable. Several beaches are suitable for swimming, picnics and other beach activities. Shell-collecting and fishing as well as skin-diving are popular.

Among the various additional sports activities are tennis, archery, fishing (including deep sea fishing), hiking, handball, and badminton. Baseball, basketball, and even football are played.

Other recreational activities include hobby shops, bridge clubs, Little Theatre groups, as well as almost unlimited opportunities for the camera fan.

Officers' and CPOs' Messes (Open), enlisted men's clubs and numerous island "nite spots" offer good food and entertainment.

Six New Correspondence Courses For EMs Are Ready

Six new Enlisted Correspondence Courses are now available to all enlisted personnel.

Enlisted Correspondence Courses will be administered (with certain exceptions) by your local command instead of by the Correspondence Course Center.

If you are on active duty, your division officer will advise you whether the course for which you have applied is suitable to your rate and to the training program you are following. If it is, he will see that your application (NavPers 231) is forwarded to the Correspondence Course Center, which will supply the course materials to your command for administration.

Personnel on inactive duty will have their courses administered by the Correspondence Course Center just as in the past, using application form NavPers 580.

The new or revised courses are:

Course	NavPers No.
Torpedoman's Mate 2, Vol 2	91297
Aerographer's Mate 3	91663
Mechanic, Chief	91581-1
Aerographer's Mate 2	91664
Mechanic 1	91580-1
Construction Electrician's Mate 3	91568-1

The last roundup of Enlisted Correspondence Courses was in ALL HANDS, June 1956 (p. 50). New courses will be listed as soon as they are available.

Silver Dollar Pay Plan

Fifty thousand clinking silver dollars produced a pleasant sound as they were passed by Navymen across the counters and into the tills of merchants operating in and around Minnesota's Twin Cities, Minneapolis and Saint Paul. A one-shot "hard money" pay plan had been put into effect for the sailors by the Naval Air Station at Wold Chamberlain Field.

The unusual pay scheme was designed to show Twin Cities merchants and residents in the air station vicinity just how much the Navyman's semi-monthly income means to the area's economy. The silver dollar pay program was made possible by the cooperation of a Nevada bank and the Las Vegas, Nev., Chamber of Commerce.

To carry out the scheme, "weekend warriors" on training flights were assigned to pick up the silver hoard in Las Vegas, along with souvenir canvas money bags for use in hauling the "loot" away from the NAS.

Hidden somewhere among the rolls of hard dollars which went over the pay table there was one cart wheel which had been specially fitted with a copper rim; the business proprietor who received this "lucky buck" was entitled to assume the privileges and prerogatives of air station "skipper for a day."

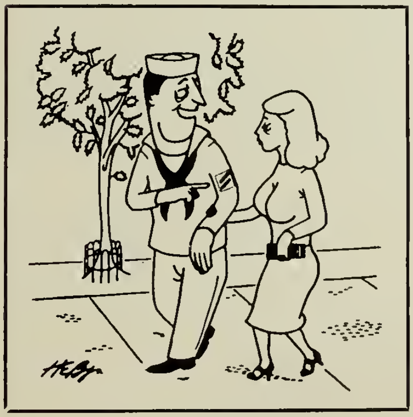
The lucky coin was spent at a utilities payment service whose lady proprietor—quite by accident—was born during the same year in which the coin was minted, 1898. The lady "captain," appropriately decked out with a four-striper's shoulder marks on her cloth coat, proceeded to take over the duties of the air station's regular skipper, CAPT Frank F. Gill, USN—but with a difference. In addition to such regular duties as reviewing "Hiawatha's Week End Warriors," making orientation flights in various aircraft, attending a meeting of department heads and lunching in the BOQ, the "captain-for-a-day" also took time to show the duty cook how the turkeys should be stuffed for Sunday dinner.

Off to Okinawa? Here's More Duty You're Likely to Like

MANY A MAN in the Navy today has vivid—and not too pleasant—recollections of an earlier Okinawa, but these memories have little relationship to present day duty on this island. If you—or maybe your pappy—saw Okinawa service during World War II, you'd never recognize the place today. Here's the rundown on living conditions at the present time.

Climate. Owing to the influence of the Japan Current, Okinawa has a sub-tropical marine climate with a temperature range from an extreme low of 41 degrees to a high of 91 degrees. The average annual moisture content of the air is very high, averaging 76 per cent. Typhoons occur with the greatest frequency from May to September. An average of three to four typhoons yearly do some damage; however, because of specialized building construction and established safety practices, there is little damage and no casualties.

Housing. Government quarters of both permanent and temporary construction are available to dependents. The permanent-type quarters are of concrete blocks with asphalt tile floors. The temporary types are quonset huts and buildings constructed of prefabricated metal materials. A cookstove, refrigerator, and water heater are installed in the quarters, and basic items of furniture are provided. At present, there are eight MOQs (married officer quarters) and 10 MEQs (married enlisted quarters) available. The current waiting period for government quarters is eight to 10 months. No private rentals are available; however, some houses are for sale in approved living areas. Hotel accommodations for dependents are not available.



"The idea is to acquire as few bad marks as possible."

Household Effects. All Navy quarters and housing are equipped with essential items of furniture. Expensive items of furniture are not recommended, because of the high humidity and termites. Grass and fiber rugs are available on the island at low prices. Most people have found them highly satisfactory and not nearly so susceptible to mildew and mold as rugs you would bring from home. China, silverware and kitchen utensils should be shipped, or they may be purchased at very reasonable prices at the PX. It is suggested that you ship the following: household linens (including blankets, sheets and pillows), dishes, ironing board and iron, hardware items (such as nails, tacks, screws), oilcloth, small oil heaters, shower curtains, all equipment and furnishings needed for infants and small children, alarm clocks, clothes hangers, and, if desired, innerspring mattresses.

Electricity. Your electrical appliances will work without adjustment, since power on Okinawa is 110-volt, 60-cycle, AC, as in the States. All cooking is done by electricity. Take any of your appliances such as washing machine, vacuum sweeper, radio, sewing machine, fans and other electrical appliances which make life more pleasant for you. Your television set can also be used.

Servants. Servants are readily available with the average wage ranging from $10 to $15 per month on a full or part-time basis. Social security and health insurance are included in the wage.

Clothing. The winter uniform is worn approximately three months out of a year; therefore, bring both summer and winter uniforms. Off duty, civilian clothes may be worn. Temperature and humidity make clothing hard to care for and have made Okinawa a pretty casual station in this respect. For women, summer clothing of cotton, light silk, rayon, and linen is desirable most of the year, but warmer clothing is needed for approximately three months of the year, as mentioned above. It is suggested that you take a complete wardrobe for each member of the family. Make certain you take plenty of shoes, lingerie, children's clothing, women's sweaters, dresses, suits, blouses, rainwear, heavy coats, sports clothing and all clothing and toilet items for infants. Washable is the keynote for Okinawan clothing.

Dry cleaners on the island are not equipped to handle delicate materials. Women wear hats occasionally, but kerchiefs are popular headgear, providing protection against the rain and wind. Hose are seldom worn except for the few cold months.

Furs and leather items such as luggage are very susceptible to the molds that are prevalent in damp climates, therefore, you should avoid bringing them. Many find it to their liking, and also cheaper, to buy material, of which there is usually an excellent stock, and have clothing made by the local tailors or dressmakers. However, ready-made clothing is available at the PXs and at local stores. Okinawa is a coral island and hard on footwear; therefore, take a good supply of shoes for the whole family.

Religion. Religious activities including Sunday schools are available for all faiths at the various bases. Protestant and Catholic missionaries from the States are active on the island, and draw much of their support from the military.

Schools. The schools on Okinawa are very good. They are operated by the Army and Air Force and run from kindergarten through the twelfth grade. School buses carry the students back and forth, and inex-

"Why don't you reenlist every year?"

pensive lunches are available at the school.

There has been a university on the island since the war, but college-level study for dependents of military personnel is not available.

Food. The commissaries are good, carrying a full line of canned goods, frozen fruits, and vegetables and an excellent supply of meat. There is a milk reconstitution plant on the island, so milk is no problem. There are also several approved vegetable markets and grocery stores available.

Medical and Dental Care. Medical facilities are available and provide routine medical care. Patients who need specialized care are taken to the nearest armed forces medical facility in the States that can give the care required.

Essential drugs and medicines are furnished by dispensariess and hospitals when required in treatment of a case. Common medical and drug items, such as aspirin, band aids and antiseptics, may always be purchased at the PX.

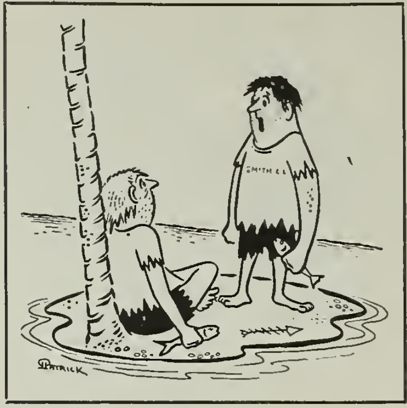
NOW HERE'S THIS

No Competition

B. B. Lyle, ME1, of NAAS Kingsville, Texas, has found an avocation in which he can anticipate few competitors. He sells skunks.

The supply factor is the big problem. At present, his best solution is to wander along the byways in the vicinity of the station and let nature take its course. No need to use dogs, says Lyle. He merely uses his eyes and follows his nose and, when the crucial moment approaches, simply grabs the wee beasties with his hands.

Although, according to latest reports, he has not yet missed in his first, important snatch, his remaining friends insist on approaching him from leeward.



"Wonder if we come under Shorvey or Seavey?"

Automobiles. Although there is adequate bus and taxi service available on the island, you will enjoy having your own automobile. It should be in good shape before you leave the States, and it sould be undercoated and well waxed. The military license fee is $1. Parts for most makes of cars are readily available and garage service is easily obtainable. Automobile insurance is required and, if purchased locally, will cost about $35 annually.

Recreation. Recreation facilities include swimming, baseball, golf, softball, tennis and hobby shops. In addition, theaters are located at most of the military installations on the island.

Many Americans turn to deep-sea fishing although there is also some reasonably good fresh-water fishing on the island. As for hunting, there are ducks, doves and quail.

One of the most popular hobbies on the island is photography. The scenery furnishes a wide variety of subjects — beaches, rugged hills, primitive villages, terraced rice paddies and checkerboard gardens on the hillsides.

Currency. Currency used in the military installations is Military Payment Certificates which may be changed to Class B Yen for use in villages and towns. For convenience it is advisable to keep a checking account in the States. Postal money orders may be purchased locally.

Pets. It is recommended that pets be left at home. However, in the event you decide to bring a pet, the only formal entry requirements are complete immunization and a restriction of two pets to a family. Dogs under 18 months of age must be permanently immunized against distemper. No quarantine period is imposed upon arrival of pets except the time required for examination and the checking of vaccination.

Passports. Passports are required for dependents. Upon receipt in the headquarters of the 12th Naval District, of the application for dependents transportation overseas, pertinent information will be forwarded concerning passports and other helpful information.

USNR and Temporary Officers Recommended for Regular Navy

The names of 201 Naval Reserve and temporary officers recommended for permanent appointment in the Regular Navy have been announced.

Those to receive appointments, provided they meet all administrative requirements, are: Line (Men and Women), 64; Aviation Line, 89; Supply Corps, 21; Chaplain Corps, seven; Civil Engineer Corps, seven; Medical Service Corps, two; and Nurse Corps, 11.

Promotions Announced for Line and Staff Officers

The names of 867 staff corps and 2270 line Regular Navy and Naval Reserve officers recommended for selection for temporary promotion have been announced.

Those recommended included: *captain:* Civil Engineer Corps, 14; *lieutenant commander:* Medical Service Corps, 96, Supply Corps, 163, Chaplain Corps, 24, Civil Engineer Corps, 61, Dental Corps, 22, Medical Corps, 75, and Nurse Corps, 3; *lieutenant:* Medical Service Corps, 46, Supply Corps, 156, Chaplain Corps, 53, Civil Engineer Corps, 58, Nurse Corps, 96, unrestricted line, 2134, and restricted line and limited duty, 136.

QUIZ AWEIGH ANSWERS
QUIZ AWEIGH IS ON PAGE 47

1. (c) Radar picket escort vessel
2. (a) Continental Air Defense Command
3. Minesweeper, coastal
4. (c) Birds
5. (a) 40mm antiaircraft gun
6. (b) Trainer and pointer.

Roundup on Sources of Information for the Career Navyman

In the normal day-to-day naval operations there is a continuing flow of information on your Navy career, service advantages, opportunities and benefits. This information appears in a variety of forms — in manuals, handbooks, regulations, pamphlets, catalogs, instructions and notices.

Although most of this information is generally available to all ships and stations, it is frequently difficult to locate, changes are frequently made and, at times, some information is unintentionally overlooked.

So here's an up-to-date list of the directives dealing with career opportunities and programs available to Navy enlisted personnel and officers, classified according to subject. It supersedes that presented in March 1956 ALL HANDS, pp. 50-52.

ADVANCEMENT OR CHANGE IN RATE OR RATING

GENERAL PROGRAMS

Subject	Pertinent Directive or Authority
Advancement:	
Policy:	BuPers Inst. 1430.7B *BuPers Manual* (Pt. C, Chap. 7, Sec. 2)
Qualifications:	*Manual of Qualifications for Advancement in Rating* (NavPers 18068)
Eligibility:	BuPers Inst. 1414.3A
Naval Reserve	BuPers Inst. 1430.1A
Service-wide Competitive Examinations for Advancement to Pay Grades E-4, E-5, E-6, and E-7; policy, eligibility	BuPers Inst. 1418.7C
Changes in Rate, Rating, and Rate Symbols; policy	BuPers Inst. 1440.5A
Future Input to GS, GF and AQ Rating; policy	BuPers Inst. 1440.14A
Program for Adjustment of the Enlisted Rating Structure through Formal School Training and Through In-service Training; establishment of	BuPers Inst. 1440.18

APPOINTMENT TO COMMISSIONED GRADE

NAVAL ACADEMY, FLIGHT TRAINING, OCS

Subject	Pertinent Directive or Authority
Naval Preparatory School	Art. C-1203, *BuPers Manual,* BuPers Inst. 1531.2
Aviation Cadet Training Program; eligibility requirements; procedures for applying	BuPers Inst. 1120.20A
Officer Candidate School; policy, eligibility	BuPers Inst. 1120.11A

SPECIAL PROGRAMS

Subject	Pertinent Directive or Authority
Appointment to Commissioned Grade, Integration and LDO, Programs, Appointment to Warrant Grade; information concerning	BuPers Inst. 1120.18C
Selection of Qualified Members of the Naval Service for Aviation Officer Candidate Training and Appointment to Commissioned Grade in the Line; policy, eligibility	BuPers Inst. 1120.25
Regular Navy Augmentation Program; policy, eligibility	BuPers Inst. 1120.12D
Appointment to Commissioned Grade, SDO (LAW), 1620; policy, eligibility	BuPers Inst. 1120.21
Appointment to Commissioned Grade, Optometry, Pharmacy, and Medical Allied Sciences Sections of the Medical Corps, Regular Navy; policy, eligibility	BuPers Inst. 1120.8A
Appointment to Commissioned Grade in Administration and Supply Sections, Medical Service Corps, Regular Navy; policy, eligibility	BuPers Inst. 1120.15A
Appointment to Commissioned Grade in Administration and Supply Sections, Medical Service Corps Reserve, U. S. Naval Reserve; policy, eligibility	BuPers Inst. 1120.10A
Nomination of Qualified Enlisted Personnel for the NROTC Program; policy, eligibility	BuPers Inst. 1111.4B
Appointment to Commissioned Grade of Enlisted Women in the U. S. Naval Reserve; policy, eligibility	BuPers Inst. 1120.9A
Appointment in the Field of Sciences of Personnel in the Medical Service Corps, Naval Reserve; policy, eligibility	BuPers Inst. 1120.24

TRAINING

GENERAL TRAINING

Subject	Pertinent Directive or Authority
Enlisted Training Schools and Courses; policy, quotas, eligibility for enrollment	BuPers Inst. 1500.25A, *Catalog of U. S. Navy Training Activities and Courses* (NavPers 91769-B)
Information and Education Program; policy	BuPers Inst. 1560.1, Art. D-2103, *BuPers Manual Information and Education Manual* (NavPers 16963-C)
Enlisted Correspondence Course Program	*Catalog of Enlisted Correspondence Courses* (NavPers 91200-A)
Navy Enlisted Advance School Program; information concerning	BuPers Inst. 1510.69A

SPECIALIZED TRAINING

Subject	Pertinent Directive or Authority
Naval Air Mobile Trainer Program; policy, eligibility	BuPers Inst. 1306.31A
U.S. Naval School of Music; applications for courses	BuPers Inst. 1336.2B
Assignment of Enlisted Personnel to the Nuclear Power Training Program; policy, eligibility	BuPers Inst. 1306.53A SecNav Inst. 1000.3
Tuition Aid Program; resumption of	BuPers Inst. 1560.10

REENLISTMENT

Subject	Pertinent Directive or Authority
Reenlistment and Voluntary Extension of Enlistment of Regular and Reserve Personnel on Active Duty; procedure	BuPers Inst. 1133.1C, BuPers Inst. 1133.10
Reenlistment in the Regular Navy or Voluntary Retention on Active Duty of Inducted Personnel; policy, eligibility	BuPers Inst. 1133.8
Discharge up to One Year in Advance of Normal Expiration of Enlistment Date in order to Reenlist; policy, eligibility	BuPers Inst. 1133.4
Reenlistment in the Regular Navy of Naval Reserve Personnel Serving on Active Duty; policy, eligibility	BuPers Inst. 1130.4C

Subject	Pertinent Directive or Authority
Assignment to Duty of Personnel on Reenlistment; policy, options, choice of duty, etc.	BuPers Inst. 1306.25C
Assignment to a School as an Incentive for Reenlistment; policy, eligibility	BuPers Inst. 1133.5

SPECIAL DUTY AND ASSIGNMENT

Subject	Pertinent Directive or Authority
GENERAL POLICY	
Sea/Shore Rotation; shore duty eligibility list; policy	BuPers Inst. 1306.20C
Training and Administration of the Naval Reserve; duty in; policy, eligibility	BuPers Inst. 1001.7A
Retention on Active Duty and Recall of Enlisted Naval Reserve and Fleet Reserve Personnel; Information concerning	BuPers Inst. 1001.21
Assignment and Rotation of Enlisted Women; policy	BuPers Inst. 1306.10B
SPECIAL ASSIGNMENTS	
Transfer and Assignment for Humanitarian or Hardship Reasons; policy, eligibility	BuPers Inst. 1306.24A
Assignment Duty of Sole Remaining Sons; policy	BuPers Inst. 1300.11
Assignment to Naval Missions, Attaches, Military Aid Groups, Joint Staffs, SHAPE; policy, eligibility	BuPers Inst. 1306.6B
Assignment to Recruiting Duty; policy, eligibility	Art. C-5208, *BuPers Manual*, BuPers Inst. 1336.1A
Assignment to Duty as Instructors; policy, eligibility	BuPers Inst. 1306.22B, BuPers Inst. 1306.42 (applies to musicians only)
Assignment with Naval Security Group Activities, policy, eligibility	BuPers Inst. 1306.23C
Assignment of Enlisted Personnel to Initial Submarine Training and Duty; policy, eligibility	BuPers Inst. 1540.2B
Assignment to Reserve Training Submarines; policy, eligibility	BuPers Inst. 1306.38
Assignment to Duty Involving Demolition of Explosives; policy, eligibility	BuPers Inst. 1320.5A

PAY, ALLOWANCES, SAVINGS, INSURANCE

Subject	Pertinent Directive or Authority
Soldiers' and Sailors' Civil Relief Act of 1940; summary of benefits under	BuPers Inst. 1760.4
Uniformed Services Contingency Option Act; options under	BuPers Inst. 1750.1B
Social-Security Benefits Due to Active Duty; summary of benefits under	BuPers Inst. 1760.8
Obtaining and Recording Social Security Account Number Cards for Active Duty Members of the Armed Forces; procedures	BuPers Inst. 1741.8
Basic Allowances for Quarters; policy, eligibility	BuPers Inst. 7220.12
Savings Deposits of Enlisted Personnel; policy	SecNav Inst. 7220.9
Retainer Pay Upon Transfer to the Fleet Reserve; policy, eligibility	BuPers Inst. 1813.1, Art. C-10321, *BuPers Manual*
U.S. Government Life Insurance, National Service Life Insurance, and Servicemen's Indemnity; status of as result of P.L. 881, 84th Congress, and action required thereby	BuPers Inst. 1741.3B
Mortgage Insurance for Servicemen to Aid in the Construction or Purchase of Homes; policy, eligibility	SecNav Inst. 1741.4

SEPARATION AND RETIREMENT

Subject	Pertinent Directive or Authority
Separation and Civil-Readjustment Information; summary	BuPers Inst. 1760.12
Review of Undesirable and Punitive Discharges; information concerning	BuPers Inst. 1626.16
Early Separation of Enlisted Personnel to Attend College	BuPers Inst. 1910.12
Retirement, Voluntary and Naval Reserve With/Without pay; policy, eligibility	BuPers Inst. 1820.1A, BuPers Inst. 1820.2, SecNav Inst. 1811.3A

MISCELLANEOUS

Subject	Pertinent Directive or Authority
GENERAL INTEREST	
The Navy Relief Society; services by	Art. C-9207, *BuPers Manual*, BuPers Inst. 1747.1A
The American Red Cross; services by	Art. C-9207, Art. C-10308(7), *BuPers Manual*
Voting by Members of the Armed Forces; policy	BuPers Inst. 1742.2A
Immigration and Nationality Act of 1952; alien spouses, naval personnel, information concerning	SecNav Inst. 1750.1
VA Hospitals; transfer of naval active and retired personnel to; policy	BuMed Inst. 6320.11
Marriage of USN and USMC Personnel Outside the United States and Within Far East Command; policy	Art. C-11109, *BuPers Manual*, SecNav Inst. 1752.2
Visas for Alien Wives and Children of Naval Personnel; information concerning	SecNav Inst. 1750.2
Participation of Enlisted Personnel in Inter-Service and International Athletic Events and Competitions; policy, eligibility	BuPers Inst. 1710.1C, BuPers Inst. 1710.2
Transportation of Dependents; policy	BuPers Inst. 4650.6A, BuPers Inst. 4650.8A, SecNav Inst. 4651.1
Summary of State Bonuses	BuPers Inst. 1760.3B

PROGRAMS AND OPPORTUNITIES OF PARTICULAR INTEREST TO OFFICERS

TRAINING

Subject	Pertinent Directive or Authority
GENERAL TRAINING	
Schools and Courses	*Catalog of U.S. Navy Activities and Courses* (NavPers 91769-B) BuPers Inst. 1500.25A
General Line School; policy, eligibility	BuPers Inst. 1520.43
Postgraduate Instruction; policy, eligibility	BuPers Inst. 1520.15C
Five-Term College Training Program; policy, eligibility	BuPers Inst. 1520.37 BuPers Inst. 1520.4B
Completion Naval Aviation College Program for USN Officers; policy, eligibility	BuPers Inst. 1520.3B
Officer Correspondence Courses; summary	*Catalog of Officer Correspondence Courses* (NavPers 10800-A)
Tuition Aid Program; resumption of	BuPers Inst. 1560.10
SPECIALIZED TRAINING	
Flight Training (HTA); policy, eligibility	BuPers Inst. 1520.20A

Subject	Pertinent Directive or Authority
Underwater Demolition Training; policy, eligibility	BuPers Inst. 1520.7
Deep Sea Diving Training; policy, eligibility	BuPers Inst. 1520.4A
Training and Administration of the Naval Reserve; policy	BuPers Inst. 1001.-10A

ASSIGNMENT TO SPECIAL DUTY

Subject	Pertinent Directive or Authority
Assignment to Submarine Duty; policy, eligibility	BuPers Inst. 1520.6G
Assignment to Special Weapons Program; policy, eligibility	BuPers Inst. 1331.1A
Assignment With a Navy Security Group; policy, eligibility	BuPers Inst. 1331.2A
Assignment to Duty Involving Demolition of Explosives; policy, eligibility	BuPers Inst. 1320.5A
Assignment to Nuclear Power Program; policy, eligibility	SecNav Inst. 1000.3

APPOINTMENT

Subject	Pertinent Directive or Authority
Appointment to Ensign, Integration and LDO Program; policy, eligibility	BuPers Inst. 1120.-18C
Appointment of Naval Reserve Aviators to Commissioned Grades in Regular Navy; policy, eligibility	BuPers Inst. 1120.-14A
Appointment in the Medical Corps and Dental Corps, Regular Navy; policy, eligibility	BuPers Inst. 1120.3D

MISCELLANEOUS

Subject	Pertinent Directive or Authority
Uniform Allowances for Naval Reserve Officers; entitlement and reimbursement for	BuPers Inst. 7220.-14A
Naval Reserve Officers Not on Active Duty; Regulations and Procedures Governing Screening the Ready Reserve and Assignment to, Transfer Between, and Discharge from Reserve Categories; policy	BuPers Inst. 1821.1A

DIRECTIVES IN BRIEF

This listing is intended to serve only for general information and as an index of current Alnavs and NavActs as well as current BuPers Instructions, BuPers Notices, and SecNav Instructions that apply to most ships and stations. Many instructions and notices are not of general interest and hence will not be carried in this section. Since BuPers Notices are arranged according to their group number and have no consecutive number within the group, their date of issue is included also for identification purposes. Personnel interested in specific directives should consult Alnavs, NavActs, Instructions and Notices for complete details before taking action.

Alnavs apply to all Navy and Marine Corps commands; NavActs apply to all Navy commands; BuPers Instructions and Notices apply to all ships and stations.

Alnavs

No. 62—States that, under certain limited conditions, anyone paid a reenlistment bonus under Section 208 of Career Compensation Act between 16 Jul 1954 and 29 Mar 1955, may reelect to have this bonus paid under Section 207 of the same Act.

No. 63—Announced approval by the President of the report of a selection board which recommended Regular Marine Corps and Marine Corps Reserves for temporary promotion to grade of captain.

No. 64—Announced an emergency appeal by the American Red Cross to assist the Hungarian people.

No. 65 — Conveyed Christmas greetings from the Chief of Naval Operations to the U. S. Navy.

No. 66 — Conveyed Christmas greetings from Secretary of the Navy to U. S. Navy and Marine Corps.

Instructions

No. 1120.15B — Establishes the policies and procedures for the submission of applications from qualified USN personnel for appointment to ensign, USN, Medical Service Corps.

No. 1306.58A—Establishes revised procedures relative to the transmission of personnel data via transceivers and to the use of punched cards in the assignment and reassignment of enlisted personnel.

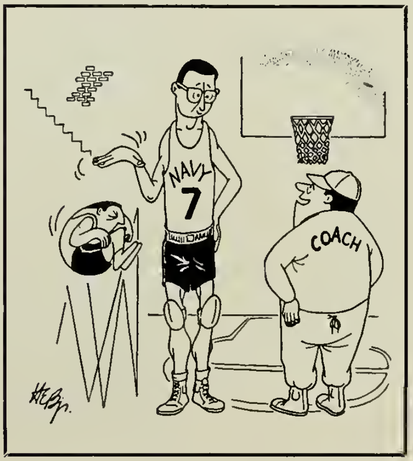
No. 1306.62—Presents revised criteria and procedures governing the shore/sea and sea/shore rotation of enlisted personnel.

No. 1540.33 — Provides information concerning the Navy Nuclear Power Training Program and informs enlisted personnel how to apply for training in the program.

No. 1750.6—Provides administrative regulations for immediate payment of the death gratuity authorized by Title III, Public Law 881, 84th Congress.

No. 1926.1C—Promulgates revised policies governing the extension of, and release from, active duty of USNR and certain USN officers.

No. 5321.1B — Promulgates instructions for the preparation of the Roster of Officers.



"Nice fingertip control there, Shafer."

Notices

No. 1085 (23 November)—Introduced a standard document for the Officer's Service Record maintained at his duty station and the officer's record maintained within the Bureau of Naval Personnel and provided instructions governing its preparation.

No. 1418 (3 December)—Invited attention to the schedule of service-wide competitive examinations for advancement to pay grade E-4 of certain ratings in May.

No. 1800 (3 December) — Announced the publication of a guide book for retired and Fleet Reserve personnel.

No. 1088 (10 December) — Advised activities of certain changes, occasioned by the enactment of the Servicemen's and Veterans' Survivor Benefits Act, Public Law 881, 84th Congress, in the Casualty Assistance Calls Program.

No. 1741 (11 December) — Announced distribution to commands of pamphlets about Survivor Benefits and Medical Care Acts of 1956.

No. 5802 (18 December)—Calls attention to the provisions of BuPers Inst. 5802.1, which is concerned with the report of aliens' addresses.

DECORATIONS & CITATIONS

NAVY CROSS

"For extraordinary heroism in action against the enemy . . ."

★**Gooding**, Callis C., AD3, USN, serving as crewman of a Helicopter in Helicopter Squadron One, Unit Fourteen, attached to HMAS *Sydney* near Sariwon, Korea, in October 1951. Despite grave hazards presented by the limited flying range of the rescue helicopter, approaching darkness and the certainty of capture or possible death if the mission failed, Gooding accompanied the helicopter pilot into enemy-held territory to assist in the rescue of two downed airmen. Approaching the objective in the face of intense hostile antiaircraft and small-arms fire, Gooding provided effective cover and fire support during the period in which the helicopter landed behind enemy lines, picked up the two airmen and departed to safety.

★ **Kinney**, Sheldon H., CDR, USN, serving as Commanding Officer of USS *Bronstein* in action against enemy submarines in Atlantic waters on the night of 29 Feb-1 Mar 1944. Detecting the swift and unopposed approach of U-441 toward the vulnerable forces of his search group, Commander Kinney maneuvered for a daring attack and skillfully directed his gunfire, scoring hits on the conning tower and causing the enemy submarine to halt its approach and submerge. After avoiding two torpedoes launched against his ship, he proceeded to conduct an underwater weapons attack, inflicting extensive damage upon the U-boat and forcing its return to a repair base. Subsequently, he encountered U-709 by sonar and succeeded in sinking this submarine with the assistance of other members of his force. In the final action of the night, he detected U-603 which was in a favorable position to fire torpedoes at a friendly carrier. Immediately launching an attack with depth bombs, he forced the U-boat to defensive action, and pressed home strikes to sink the submarine despite temporary disablement of his ship by the explosion of a torpedo in the wake.

★**Kitka**, Alex J., HN, USN, serving with a Marine Rifle Company in Korea on the night of 16-17 Jul 1953. When a reconnaissance patrol operating forward of the main line of resistance was ambushed by a superior enemy force and sustained 50 per cent casualties, Kitka, along with others of the support and evacuation team, moved out quickly to assist the patrol. Before reaching the patrol's position, the team suffered casualties because of enemy mortar fire. Although suffering painful chest wounds and unable to move his right arm, Kitka administered first aid to his fallen comrades before moving up the hill under intense small-arms and mortar fire to the besieged patrol. Removing the wounded to cover he rendered first aid, ignoring his own condition and refusing to leave until all known casualties had been evacuated.

DISTINGUISHED FLYING CROSS

"For heroism or extraordinary achievement in aerial flight . . ."

★**Brown**, Vergil N., Jr., LT, USNR, for participating in aerial flights during the year 1954.

★**Fernandez**, Caesar, Jr., LCDR, USN, for participating in aerial flights during the year 1954.

★**Murphy**, Francis J., LT, USN, for participating in aerial flights during the year 1954.

Gold Star in lieu of third award:

★**May**, Selden N., LCDR, USNR, for participating in aerial flights during the year 1954.

LEGION OF MERIT

"For exceptionally meritorious conduct in the performance of outstanding service to the Government of the United States . . ."

★ **De Laureal**, Henry H., CDR, USN, as Commander Task Unit 5.1.4. during MSTS Arctic Operations 1955 in connection wih Project 572 (Central Group) from 3 Aug to 15 Sep 1955. Commander De Laureal skillfully carried out the hazardous task of delivering vital cargoes on the beaches of the easternmost sites of the Distant Early Warning Line. Assigned the task of off-loading all cargo at Barter Island, Alaska, under extremely hazardous conditions of heavy ice, fog and snow, he accomplished his assignment with courage and ingenuity.

★ **Enright**, George P., CAPT, USN, as Commander Task Group 6.2 from 15 Jun to 30 Sep 1955. In the face of adverse weather and dangerous ice conditions, Captain Enright safely escorted a large force through poorly charted waters to designated sites on the eastern shore of Baffin Island. Throughout the entire operation, he skillfully employed his available forces, with the result that his Group's difficult mission was completed ahead of schedule with only superficial damage to his ships, when experience indicated greater damage could be expected.

★**Marshall**, Walter L., CDR, USN, as Salvage Officer and Assistant Maintenance Officer on the Staff of Commander Service Squadron Three from 21 May 1954 to 22 May 1955. Commander Marshall skillfully planned, supervised and coordinated the successful salvage work on the USNS *LST 546* during September and October 1954 when that vessel was driven on the rocky shore of Hakodate Bay, Hokkaido Island, Japan; and again when the same ship broached on the rocks at Cheju Do, Korea, in April 1955.

★ **Towner**, George C., RADM, USN, as Commander Task Group 5.1 from 15 Jul to 18 Sep 1955. Admiral Towner exhibited sound judgment and determination in combating the extremely hazardous conditions of uncharted waters, heavy ice concentrations, fog and cold while commanding the ocean transportation of personnel and equipment in support of the construction of the Distant Early Warning Line across Northern Alaska and the Canadian Northwest Territories. Under his forceful and inspiring leadership, ships of the Task Group penetrated the Canadian Arctic during one of the worst shipping seasons to deliver cargo at designated sites along a fifteen-hundred-mile beachhead.

NAVY AND MARINE CORPS MEDAL

"For heroic conduct not involving actual conflict with an enemy . . ."

★ **Foley**, William J., Jr., LT, USNR, for heroic conduct on board USS *Bennington* (CVA 20) when that vessel experienced a series of explosions south of Newport, R. I., on 26 May 1954.

★ **Mattson**, Charles C., TM3, USN, for heroic conduct on board USS *Pomodon* (SS 486) during a series of explosions in that vessel on 20 Feb 1955.

"ELLY MAE"

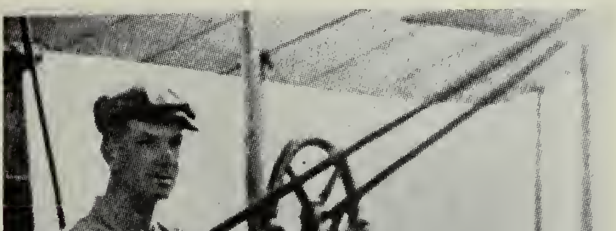
ONE SHIP-MANY JOBS

ALL HANDS BOOK SUPPLEMENT

Today's minesweepers are relatively plush craft, designed specifically for the job at hand. It wasn't always that way. During World War II, the demand for minecraft so exceeded the supply that the versatile destroyer was frequently converted to that purpose. Here's the story of one such destroyer—which might be regarded as the prototype of all such heroic ships—*USS Ellyson* (DMS 19, ex-DD 454).

USS Ellyson *was named for CDR Theodore G. Ellyson,* USN, *the first naval officer to qualify as an airplane pilot, and one of the most distinguished pioneers of U. S. naval aviation. Five years after his graduation from the Naval Academy in 1905, CDR Ellyson was ordered to Los Angeles, Calif., for instruction in aviation under Glenn Curtiss, who had offered to train a pilot for the Navy free of charge.*

VERSATILE DESTROYER, USS *Ellyson* was named after CDR Theodore G. Ellyson, the first Naval Aviator.



Aside from a three-year sojourn with a sub chaser squadron during World War I and destroyer commands until 1921, CDR Ellyson was actively engaged in furthering the naval air arm. His career was cut short on 27 Feb 1938, his 43rd birthday, when he was killed in an airplane crash while on a routine flight.

COMMISSIONED in November 1941, *Ellyson* had been on patrol duty in the Atlantic only 10 days when she first witnessed the results of submarine warfare. While she was on the Halifax-Panama Canal run, she sighted a life-boat and the sinking hull of the Norwegian steamer *Horness* and was able to rescue 24 of the crew, all that remained of the sinking.

In June of 1942, in Argentia, Newfoundland, CDR J. L. Holloway (now VADM, present Chief of Naval Personnel) broke his command pennant as Commander, Destroyer Squadron 10 in *Ellyson,* and she was to remain a flagship for the rest of the war. DesRon 10 consisted of *Hambleton* (DD 455), *Rodman* (DD 456), *Emmons*

From *History of* USS *Ellyson*, made available through the courtesy of Division of Naval History, Ships' Histories Section, Navy Department.

(DD 457), *Macomb* (DD 458), *Forrest* (DD 461), *Fitch* (DD 462), *Hobson* (DD 464) and *Corry* (DD 463).

"Routine" escort duty was *Ellyson's* lot until July 1942 when she escorted a cargo of Army planes to Africa and then jobs of this sort became another type of routine until November D-Day at Casablanca when *Elly Mae* screened aircraft carriers during the action which followed.

At Fedela, *Ellyson* first showed she was a lucky ship when, a few minutes after she pulled away from a refueling tanker, *Hambleton* came alongside to refuel, and received a torpedo hit in the engineroom spaces.

For a change of climate, the destroyer reported on 19 May 1943 with *South Dakota* for duty in the British Home Fleet. Escorting battleships and convoys, she saw months of duty at sea protecting Allied shipping from Iceland to Murmansk and the Firth of Forth; in attempts at luring *Tirpitz* and other German units from their Baltic lairs; and in innumerable anti-submarine engagements. On 7 Jul 1943, *Ellyson* evacuated Scapa Flow for a mock invasion of Southern Norway—two days before the invasion of Sicily.

During operations in Iceland shortly afterward, an encounter with an ice floe slashed a 4-by-20 foot hole in *Ellyson's* bow. Nevertheless, within a month she was at sea again, bound this time for Argentia, Newfoundland, to screen the battlesnip *Iowa,* which was to carry President Roosevelt to the Tehran Conferences. Before this journey was over, *Ellyson* visited the Azores, Brazil, Freetown, Dakar, and Bermuda.

From January through March 1944, *Ellyson* worked with USS *Ranger* (CV 4), *Tuscaloosa* (CA 37), and *Augusta* (CA 31), training for the Normandy invasion.

Arriving in the Mediterranean near the end of April 1944, *Ellyson* soon afterwards led a hunter-killer group in an operation which was to become a classic of its kind, and which resulted in the destruction of *U-616* after 72 hours of the longest and most persistent sub chase in history. It ended in a spectacular surface engagement and the capture of more than 50 enemy crew members. Here's the story, based on war records:

FOLLOWING THE REPORT that two merchant vessels traveling in convoy had been torpedoed early on the morning of 14 May, DesDiv 19, consisting now of *Ellyson,* with *Rodman, Hambleton* and *Emmons,* promptly got underway from Oran and sped to the scene of the attack, latitude 36°-46′ N, longitude 0°-52′ E. Upon their arrival, they found USS *Hilary P. Jones* (DD 427) and two DEs conducting a submarine sweep. *Jones* had already delivered a depth-charge attack, and one of the DEs had followed by a hedge-hog attack. (It was later learned from survivors that *Jones'* attack had caused some damage to the submarine—the first of a repeated series of blows which ultimately resulted in the destruction of the sub.)

USS ELLYSON as (DD 454) was a *Benson* class destroyer before conversion to a destroyer minesweeper in 1944.

'ELLY MAE' commissioned in November 1941, first pulled du

Shortly after *Jones* and the DEs were detached to rejoin the convoy, DesDiv 21, consisting of USS *Gleaves* (DD 423), *Nields* (DD 616), and *Macomb* (DD 458), joined DesDiv 19 to assist in the search. A box search was conducted for several hours until a Coastal Command aircraft reported a radar contact some 30 miles to the west of the scene. *Gleaves, Nields* and *Macomb* dashed off to investigate, while the remainder continued to sweep the original site, working slowly northward.

One of the reasons for the success of this attack was the complete cooperation of the various elements of the combined hunter-killer group. As soon as the report of the sinking of the merchant ships had been received, a vast network of planes and ships had been sweeping the area. Search planes would make the original contact and it was then up to surface craft to follow up. Extensive work had earlier been done to ensure the greatest cooperation between Coastal Command aircraft and surface ships in an operation of this nature.

During the night of Sunday, 14 May, a Coastal Command aircraft made another contact well to the north of the original site and dropped flares to mark the spot. DesDiv 19 proceeded at high speed to the scene, slowing just before arrival. On the first pass, *Ellyson* made a sound contact and dropped a full depth-charge pattern on a shallow setting. Unfortunately, contact was lost and

rting and patrolling for convoys in the North Atlantic.

the four ships began a tedious box search which continued until daylight.

However, all hands were reasonably sure that their quarry was wounded to some extent, for a strong smell of diesel oil was detected by at least two of the ships. The next morning a prominent oil slick, approximately 10 miles long, was found several miles north of *Ellyson's* attack. Acting on this evidence, the division continued to sweep slowly northward.

Meanwhile, aircraft continued in their search and one reported that he had made a radar contact and had later attacked a surfaced sub. The consensus of reports indicated that the sub commander was now traveling westward and, in spite of the many search planes, was using every opportunity to surface and run. During the day, DesDiv 19 proceeded to the scene of contact and DesDiv 21 covered the northeast to prevent retreat in that direction. Tension mounted with the growing conviction that the hunt was drawing to a close.

During the following night, both divisions moved to the westward, and the next day swept to the Spanish coast in the vicinity of Cap de Santa Pola in an attempt to keep the sub from reaching the coastal waters and losing himself among the many fishing vessels to be found there. Both groups continued this close-in sweep during the night of 16-17 May, but the sub commander apparently decided to run to the northeast, as a *Wellington* bomber finally reported another contact with him about 50 miles from the point of search. Both surface groups abandoned their search and headed at high speed to the point of contact on converging courses. The time was about midnight.

The sub was running at top speed on the surface between these two groups and, for a time, succeeded in baffling them by releasing decoy balloons. However, his own pip was stronger and steadier, and could be identified by the speed he was making.

The sub sighted DesDiv 19 first and, in running from them, was completely surprised when *Macomb* caught him dead in her searchlight at some 2400 yards.

The sub (according to prisoners' remarks) mistook the searchlight for that of an aircraft and opened fire with 20mm armor-piercing projectiles. No one was injured and only minor structural damage was suffered by *Macomb*.

Macomb got in six rounds of 5″ 38 before the sub submerged. She then made a depth-charge attack and followed up 15 minutes later with another attack.

At 0145, *Nields* dropped a pattern of charges and *Emmons* dropped a pattern somewhat later. Remarks of prisoners upon first being taken, indicated that damage was progressively worse throughout the three days of the operation.

When contact was finally lost about 0230, 17 May, box search was commenced with all seven ships. Diesel oil smells were noticed whenever a ship passed through the position of these last attacks.

AT DAYLIGHT the next morning, about 0645, *Hambleton* made sound contact about 10 miles south of the attacks of the previous night. She reversed course and attacked with depth charges; regained contact and made

IN SOUTHERN FRANCE *Ellyson* assisted the invasion with bombardment of enemy shore installations.

a second attack. Meanwhile, the remaining ships formed a circle with a four-mile radius about *Hambleton, Ellyson* and *Rodman.*

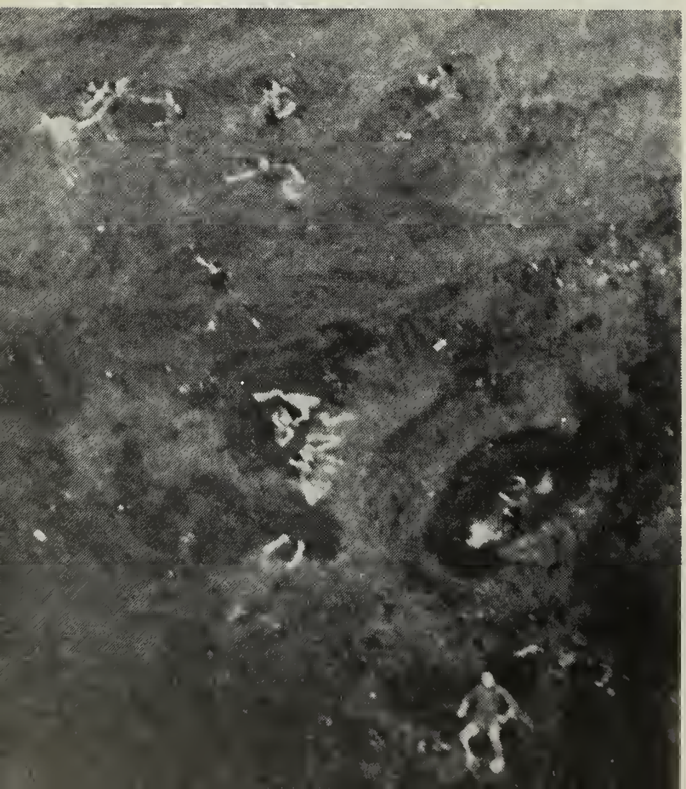
About 25 minutes after *Hambleton's* last attack, and while the three ships were attempting to regain contact, the sub surfaced in the approximate center of the three ships at about 2500 yards. All ships immediately opened fire with 5-inch, 40mm and 20mm guns. The sub crew, meanwhile, scrambled out of the conning tower into the water, and tried to surrender by waving their clothing. Since the sub had way on when surfacing, the crew rapidly drifted aft. All were recovered, although a gun crew may have been abandoned when the sub submerged the previous night.

The submarine sank on 17 May at 0812. A heavy submarine explosion was heard about three minutes later and large bubbles of air came to the surface. Little debris and no oil were noticed.

A total of 53 survivors was rescued by *Ellyson* and *Rodman.*

A week or so later, *Elly Mae* was in Plymouth, England, preparing for her role in the invasion of Normandy where she showed a remarkable prowess for shore-bombardment. Particularly outstanding was close-fire support work in the action at Pointe de Hoe, where *Ellyson* was a major factor in the final victory of the Rangers over the defending Germans. It was here, too, that *Ellyson* was fired upon for the first time, several enemy shells landing nearby or slipping through the superstructure but never quite hitting. While DD 454 was engaging shore batteries on D-Day plus 1, a nearby sister ship, *Corry,* struck a mine and was sunk.

On June 25th, the ship was among the attacking units at the bombardment of Cherbourg, knocking out two major enemy guns, sinking mines, and laying smoke screens for larger ships such as USS *Texas* (BB 35), *Quincy* (CA 39), HMS *Glasgow,* and others.



ENEMY ADRIFT—German sub crew awaits rescue after abandoning ship. *Ellyson* and *Rodman* picked up 53.

DEPTH-CHARGE pattern dropped by *Ellyson* wounded Nazi sub and lead to its sinking three days later.

At southern France, *Ellyson* led the destroyer fire-support group in close on the heels of the minesweepers, knocking out enemy troop concentrations, machinegun nests, shore batteries, and tanks during a one sided contest which saw the enemy defense shattered before they had a chance to resist the landings.

In November 1944 Ellyson *again returned to the States, this time for conversion to a destroyer minesweeper and a new designation, DMS 19, flagship of the newly formed Mine Squadron 20, composed of the converted destroyers:* Hambleton, Rodman, Emmons, Macomb, Forrest, Fitch, Hobson, Butler, Jeffers, Harding, *and* Gherardi.

NO GROUP OF SHIPS saw more action at Okinawa than Mine Squadron 20. For days at a time the crews were at their battle stations, sleeping by their guns at night and scanning the sky by day. They ate their meals at their stations because they could not relax their vigilance even long enough to serve in the messing spaces. For over three months, night and day, they faced the threat of all the enemy's suicide weapons: planes, rocket bombs, crash boats, and suicide swimmers.

On 23 Mar 1944, *Ellyson* was the first invading ship to enter Okinawa waters, landing the advance minesweeping group eight days before the invasion. During the pre-invasion days, *Ellyson* cleared the waters ahead of the battleships and cruisers of Task Force 58 on fire support missions, at night went on picket duty, and with other destroyer minesweepers acted as supporting ships for the smaller minesweepers as approaches and inner harbors were swept.

After the landings *Ellyson* spent most of her time on the radar picket stations and screening line. The combined tasks as minesweeps, escorts, pickets, and gunfire support ships took a tremendous toll, however, and of the squadron of twelve which had left Pearl Harbor, by the end of February, only three had survived the onslaught.

One of the most serious attacks occurred on 6 April.

That afternoon, *Elly Mae* left *Rodman,* which was screening YMSs off the northwest coast of Okinawa, to refuel. Then *Emmons* and quickly thereafter *Rodman* reported heavy air attacks.

Ellyson escaped attack, but she could hear the reports from the other two ships. *Emmons* announced plane after plane making runs on the ship. Some were shot down, others hit the ship, while some missed and splashed into the water. Both ships were bombed. With darkness closing, *Rodman,* then *Emmons,* anounced that they were abandoning ship. Small craft were standing by to pick up survivors.

Ellyson went to the aid of *Emmons. Hambleton* was dispatched to stand by *Rodman* which was creeping southward under her own power. At 2000 *Ellyson* found *Emmons* lying demolished, the port side of her bridge blown off, almost everything topside was damaged, and fires raging throughout the hull.

With fires on *Emmons* making it too hot to fasten a line and to tow her away, it was decided to sink the ship to prevent her from being washed on Ie Jima, then held by the Japanese.

AS MINESWEEPER DMS 19, *Ellyson* saw plenty of action in Pacific serving with Mine Squadron 20.

BALANCING THE U-BOAT sunk in the Mediterranean, three Japanese planes were painted on *Elly Mae's* bridge, all splashed by her guns during the Okinawa operation. On one occasion she fooled a Kamikaze making a run on the ship, by turning directly into the plane, confusing the pilot so that he pulled up at the last moment and crashed off the bow. In June, the final plane was splashed killing one man and wounding six more.

During the month of July, *Ellyson* was flagship of a task group which swept 7900 square miles of the East China Sea—the largest minesweeping operation heretofore registered in the records of naval warfare.

At the completion of the China Sea work, *Ellyson* operated with the Third Fleet off Tokyo, and on 8 Aug 1945, following some YMSs and AMs, probably became the first major warship to enter Tokyo Bay. She went out again and reentered later as escort for the cruiser USS *San Diego* (CL 53) and the battleship *Missouri* (BB 63),

Tokyo Bay cleared, DMS 19 was the command ship for the task group which swept the southern approaches and entrances to the Inland Sea, Hiro, Kuro, and Hiroshima harbors, clearing the way for the forces of occupation which were to follow.

For her activities after the war, Ellyson *earned dual eligibility for the Navy Occupation Service Medal; in Asia during the period 2 Sep to 6 Dec 1945, and in Europe from 11 Jan to 22 Feb 1945. She earned four Battle Stars on the European - African - Middle Eastern Service Medal and three Battle Stars on the Asiatic-Pacific Area Service Medal.*

FACING ALL the enemy's suicide weapons *Ellyson* with her squadron cleared the way for Okinawa invasion.

TAFFRAIL TALK

We knew it would come to this sooner or later, and you can't say we didn't warn you. The Naval Ordnance Laboratory reports that it has an electronic machine which checks on the accuracy of its other electronic devices. Assuming, of course, that its checker is accurate. Verification is made, no doubt, by another electronic gizmo.

★ ★ ★

On the other hand, it's pretty hard to fool cows. A local Aeronautics Commission recommends that pilots check their instruments which indicate the direction of the wind by observing the behavior of cows. The Commission has noticed that cows always point their tails toward the wind.

"Just remember to land facing the cows," the Commission suggests, "and you are landing upwind. When cows point in several directions, there is little or no wind." One cow per direction, we assume.

Don't scoff at the idea. There's plenty of room for a herd of cattle on the flight deck of our modern carriers.

★ ★ ★

A herd of cattle would be a pleasant relief to crew members of USS *Alcor* (AK 259). Recently included among its Stateside cargo from Gibraltar—ultimate destination the Columbus, Ohio zoo, via Norfolk—was a Barbary Ape, one of four surplus beasts offered by the governor of Gibraltar to U. S. zoological societies.

No doubt you've heard of the superstition of the Big Rock. As long as the Barbary Ape continues to hold residence there, Gibraltar will remain under British rule, but if all the apes were to die, Great Britain would be driven from that area.

★ ★ ★

Remember a few months ago we made admiring reference to the phrase: "Wind-kissed playground of the Bering Sea?" We now pay tribute to the unknown genius who sweat out the slogan for NAAS El Centro, Calif: "The hottest naval air station in the United States."

★ ★ ★

Ever hear of a DC—or any other rating, for that matter—who has worked on every type of ship in the Navy? We have. Know him well, in fact. He's Thomas R. Patrick, DC1, who is not only a damage controlman but also happens to be a first rate cartoonist and illustrator, and is now attached to ALL HANDS. He bears a major part of the responsibility for this month's centerspread and worked on every ship depicted there.

The All Hands Staff

The United States Navy

Guardian of our Country

The United States Navy is responsible for maintaining control of the sea and is a ready force on watch at home and overseas, capable of strong action to preserve the peace or of instant offensive action to win in war.

It is upon the maintenance of this control that our country's glorious future depends. The United States Navy exists to make it so.

We Serve with Honor

Tradition, valor and victory are the Navy's heritage from the past. To these may be added dedication, discipline and vigilance as the watchwords of the present and future. At home or on distant stations, we serve with pride, confident in the respect of our country, our shipmates, and our families. Our responsibilities sober us; our adversities strengthen us.

Service to God and Country is our special privilege. We serve with honor.

The Future of the Navy

The Navy will always employ new weapons, new techniques and greater power to protect and defend the United States on the sea, under the sea, and in the air.

Now and in the future, control of the sea gives the United States her greatest advantage for the maintenance of peace and for victory in war. Mobility, surprise, dispersal and offensive power are the keynotes of the new Navy. The roots of the Navy lie in a strong belief in the future, in continued dedication to our tasks, and in reflection on our heritage from the past. Never have our opportunities and our responsibilities been greater.

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The Bureau should be kept informed of changes in the number of copies required.

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• AT RIGHT: THE PIG, float that holds the outboard end of the sweep cable, is made ready for its plunge overboard during MinPac sweeping practice. ➧

ADVANCEMENT OPPORTUNITIES THROUGH STUDY

ALL HANDS

THE BUREAU OF NAVAL PERSONNEL INFORMATION BULLETIN

special issue

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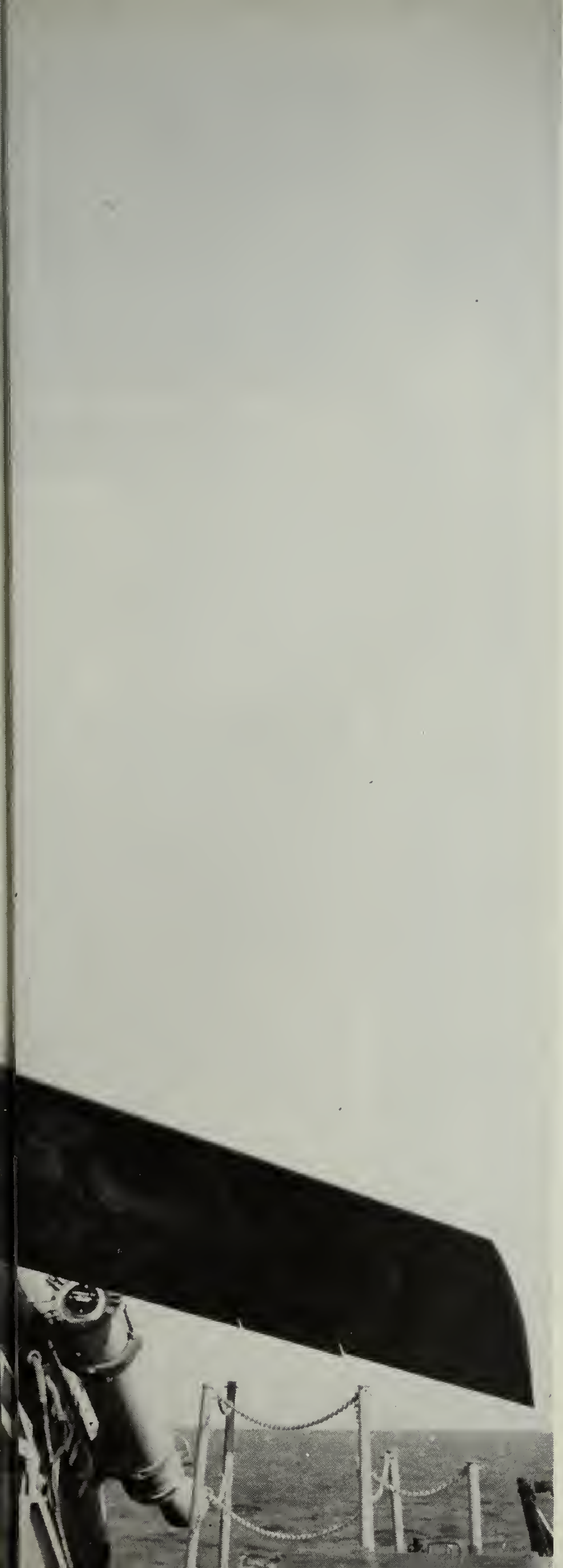
MARCH 1957



ALL HANDS

THE BUREAU OF NAVAL PERSONNEL INFORMATION BULLETIN

MARCH 1957 Nav-Pers-O NUMBER 482

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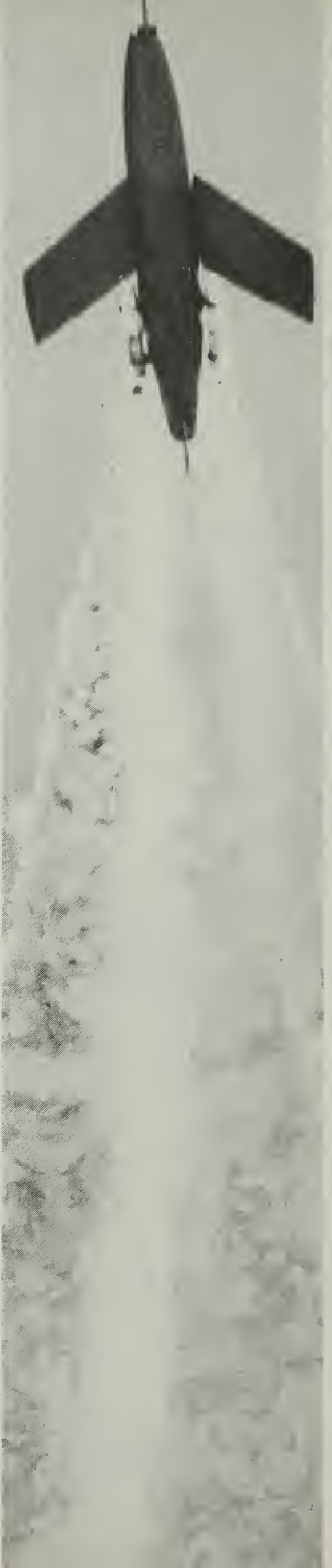
- AT LEFT: ALL SET TO GO—Navy's versatile guided missile *Regulus* rests in shipboard launcher at full height for firing. This surface-to-surface missile can be fired from cruisers, aircraft carriers and submarines.
- FRONT COVER: FOR THE 'BIRDS'—C. M. Leque, AO1, USN, inserts spotting charge in *Sparrow* guided missile prior to loading operations at NAS Miramar, California.

- CREDITS: All photographs published in ALL HANDS are official Department of Defense Photos unless otherwise designated. Photos of Polaris on page 21 by AFPS—World Wide.



NAVY'S GUIDED

IN 1945 THE ATOMIC BOMB flashed upon the world scene in a blaze of devastation that made it, by far, the most spectacular weapon to come out of World War II. But, today another weapon which saw its first real action in that conflict is getting just as much attention.

As any Navyman who knows port from starboard will tell you, this is the guided missile. And, if you've been reading the newspapers lately, you're probably aware that the United States is putting millions of dollars into research and production in this vital field of national defense.

Because of that sound investment and a lot of hard work by civilian scientists and men in uniform, the U. S. Navy has become the first military service in the world to hold a full house in these eerie new weapons.

As a surface-to-surface missile we have *Regulus*, which has been in quantity production for several years. In the surface-to-air category we have the *Terrier*, ready to jump to the nation's defense as the armament of our first guided missile cruisers and destroyers. For air-to-air use we have *Sparrow*—slung beneath the wings of sleek Navy fighters like the F3D-2M *Skyknight* and F7U-3M *Cutlass*—and *Sidewinder*, carried by fighter and attack squadrons with the Sixth Fleet in the Mediterranean and the Seventh Fleet in the Western Pacific. And, as an air-to-surface weapon we have *Petrel*, which can be launched against enemy ships and submarines by patrol planes far out of range of the target's antiaircraft fire.

Besides these, there are a flock of other guided missiles on the way. In early 1958 USS *Galveston* (CLG 93) is scheduled to rejoin the Fleet after being converted into our first cruiser armed with the long-range, surface-to-air *Talos*. *Polaris*, a surface-to-surface intermediate range ballistic missile, should be operational in about five years.

Tartar, a surface-to-air missile smaller and less expensive than *Terrier*, should soon be ready for use aboard destroyers and in the secondary batteries of larger ships.

That's quite a lineup, considering all the effort that goes into the development of just one successful missile, but as the circus barker used to say, "That's only the beginning, folks. That's only the beginning."

In the next few years, guided missiles will become more and more important to our national defense—and ever-increasing numbers of Navymen will be affected by this revolution in the concept of warfare.

Therefore, it might be a pretty good idea to take a closer look at these death-dealing gadgets.

What's A Guided Missile?

First of all, let's find a definition. And for that we go to the one accepted in OpNav Instruction 3020.1A, which calls it "an unmanned vehicle moving above the earth's surface, whose trajectory of flight path is capable of being altered by a mechanism within the vehicle."

In the book by Nels A. Parson, Jr., "Guided Missiles in War and Peace," a guided missile is referred to as a robot device that can be directed to a target by commands originating from outside the weapon or by instruments built into it. To

MISSILES

be truly guided, the craft must be capable of changing its course to take account of unpredictable factors or evasive movement of the target. Control devices and propulsion systems used in guided missiles are found in two other types of robot craft as well. The first is an early cousin of the guided missile—the preset missile that can only maintain a predetermined direction, position, or attitude with respect to a fixed reference. The conventional naval torpedo and the German V-1 and V-2 missiles are examples. The second is the remote-controlled pilotless vehicle which is not built for the purpose of attacking a target. Drone aircraft used for reconnaissance and in antiaircraft target practice, and space ships of the future, are examples of this type.

"By common usage the term guided missile means a robot craft that flies through air or space."

These birds are classified by type according to location of target and location of launcher. Therefore, a missile launched from the air (A) against a target on the sea or earth's surface (S) is called an air-to-surface missile, or in abbreviated form, an ASM. Similarly, a surface-to-air missile becomes an SAM, a surface-to-surface missile is an SSM and an air-to-air missile is an AAM. In general usage these four types cover the field.

How They Get Their Names

Usually the Navy follows an informal system in picking the names for its prize birds:

- AAMs are named for reptiles and winged creatures (except birds of prey).
- ASMs are named after sea birds.
- SSMs bear astronomical names.
- SAMs are named for mythological characters.

Thus, in air-to-air missiles we have *Sidewinder,* named for a deadly rattlesnake of the desert, and the harmless-sounding *Sparrow.* In the air-to-surface type there's *Petrel,* which gets its moniker from the far-flying, long-winged sea birds sometimes known as stormy petrels or Mother Carey's Chickens.

Talos gets its name from Greek mythology. Talos was a man of brass given to the king of Crete to guard that island, which Talos did by walking around the island three times every day.

Where an SSM name occurs in both astronomy and mythology only the astronomical name is used. *Polaris,* of course, is the North Star, but *Regulus,* besides being the name of a star, was a popular name in the middle ages for a snake which was supposed to kill by its hiss.

You can't always judge a missile by its name, however. *Tartar* doesn't follow the pattern and neither does *Terrier,* for as everyone knows, a terrier "ain't nuthin' but a hound dog" (or at least a type of dog).

What Goes Into A Guided Missile

No matter what you call them, all guided missiles are made up of four basic components—the ***airframe,*** the ***power plant,*** the ***guidance and control system*** and the ***warhead and fuses.***

"Airframe" has the same meaning among missilemen as it does among aviators. This is the component which gives the missile its aerodynamic characteristics, and the part in which the other components are placed. Designing the airframe and finding the right material from which to make it, involves thousands of man-hours during the research and development phases of a missile's creation. At present, most airframes are made of aluminum alloys, magnesium or high tensile strength steel, but a never-ending search goes on in an effort to give the airframe the heat resistance, strength, lightness and other qualities it requires. Heat

SURFACE-TO-AIR *Terrier* missiles arm GM ships against enemy air attacks.

resistance is especially important, for one of the biggest problems now facing the researchers is that of finding a material able to withstand the terrific heat generated by the friction of air moving over the missile's outer surface.

Naturally, speed is an absolute essential for a guided missile. If the bird is an offensive weapon, it must be able to outrace the planes and missiles the enemy sends up to intercept it. If it's a defensive one, it must move faster than the planes or missiles the attacker is using.

The Power Plant

Because of this "need for speed" all power plants used in guided missiles are based on some form of the thermal jet engine—usually a solid or liquid propellant rocket, a turbojet or a ramjet.

Each of these power plants has its own advantages and disadvantages. Since rocket engines carry their own oxygen, altitude has little effect on them, so the rocket is the ideal power plant for use beyond the earth's atmosphere. Rockets also offer, at least theoretically, the possibility of unlimited speed. However, their high rate of fuel consumption and the difficulties involved in steering a rocket, present problems which have yet to be solved.

The ramjet has a lower rate of fuel consumption, and therefore a longer range, than the rocket, and it can be run on gasoline or kerosene, instead of the expensive and hard-to-handle fuels used in rockets. But, it can't operate beyond the earth's atmosphere and it doesn't work at its best until it reaches supersonic speeds. For that reason the ramjet has to be launched from a fast airplane, or assisted by a rocket booster when surface-launched.

The turbojet requires less fuel than either the rocket or ramjet and requires no assistance in its takeoff. On the other hand, though, its basic weight is a serious drawback for long-range use and it's a complicated and expensive type of motor to use in a one-way operation.

Guide To A Missile

The difficulties involved in finding the right airframe and power plant are big ones, but they're minor compared to the complexities of guidance. Usually, the various types of guidance systems are classified into four major groups—self-contained, beam-rider and command, baseline and homing.

- The self-contained group, as the name implies, includes those systems in which intelligence is entirely within the missile.

The major types in this category are the preset, magnetic, inertial and stellar-navigation systems.

In preset systems a predetermined path is set into the control mechanism of the vehicle and the missile cannot "change its mind" once it is launched.

Magnetic systems use some natural phenomenon of the earth to control the missile's flight path. The German V-1, for example, used a simple magnetic compass to correct the bearing of the missile when it strayed from its preset heading.

In most inertial systems, complicated devices (called double-integrating accelerometers) measure the distance the missile has traveled in range and side-to-side and up-and-down deviations from the preset flight path. Then, based on these measurements, the control setup automatically returns the missile to its desired course.

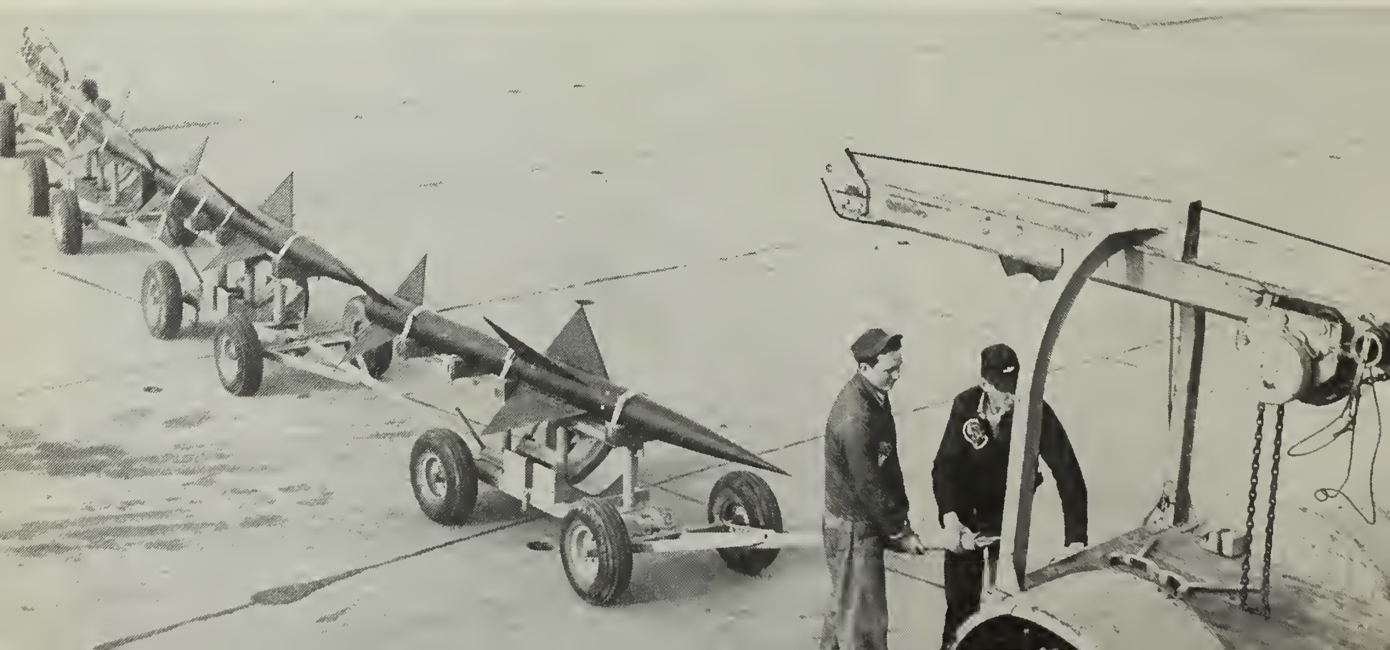
In stellar navigation systems, devices in the missile are set to sight certain stars and calculate the missile's position so that the missile will automatically navigate itself according to preset "instructions."

- The beam-rider and command group of guidance systems is composed, of course, of beam-rider and command systems and modifications.

In the simplest type of beam-riding the target is tracked by some sort of beam, usually radar, and the missile follows the tracking beam until it collides with the target. A modification of this system uses two radars—one to track the target and the other to give the missile a beam which will direct it to a predicted point of collision.

In command guidance systems the target and missile are tracked independently, the missile's flight path is computed from the tracking data and other information and radio or radar command signals are used to steer the missile to a point of collision. Some missiles in this category

MISSILE TRAIN — Missilemen move out *Sparrows* to be loaded in the wing launchers of Navy *Cutlasses* at VA-86.



carry television cameras which furnish the operator a picture of what the missile "sees" and enable him to steer the missile accordingly.

- In baseline guidance, techniques similar to those used in aircraft electronic navigation are employed to direct the missile to its target. In one example of this group, based on the same principle as loran, radio waves are sent out from two transmitters and the missile follows a beam formed by the intersections of the waves.
- In homing systems all the guidance equipment is located in the missile and the missile "homes in" on some illuminating target feature, such as heat, light, sound or magnetic field. The homers can also direct themselves toward a transmitting radio, radar, or television station, or they can guide themselves by radar echoes reflected from the target.

That, very, very, briefly covers the airframe, the power plant and the control and guidance system. But the missile's real reason-for-being is its fourth component—the warhead and the impact, proximity or ground-control fuse which detonates it.

The Punch In A Guided Missile

Eventually, a missile might carry any of these warheads:

External blast—In which the pressure wave generated by the force of the explosion does the damage.

Fragmentation—In which the explosive force ejects metallic fragments at high velocities.

Shaped charge—In which the explosive force is pointed in one direction and damage is produced either by the force of the blast or by fragments ejected.

Explosive pellet—In which separately fused pellets would be ejected from the warhead to detonate either on impact with, or after penetration of, the target.

Nuclear—An atomic missile could destroy military targets while at the same time releasing radio-active elements. An atomic or hydrogen bomb would be an awesome weapon even if it were dropped from a World War I "Jenny." But, when one of these killers can be carried in a vehicle moving at several thousand miles per hour, its lethal power is multiplied tremendously.

Keeping that fact in mind, the Navy is going all-out to help the United States keep its lead in the guided missile field. —Jerry Wolff

POISED FOR ACTION — An F9F-8 *Cougar* hovers like a peaceful but alert hornet, ready to strike in defense if necessary with its *Sidewinder* 'stingers.'

UP FROM BELOW—Guided missile submarine USS Tunny (SSG 282) prepared to launch *Regulus* from her deck using JATO bottles for initial flying speed.

MISSILE OF TOMORROW — *Regulus II*, big brother of the now operational *Regulus*, is shown in artist's conception.

Impact of Missiles on Ships

"IT IS INTERESTING, if not amusing, to note that the introduction of the *rifled gun*, the *torpedo*, the *aerial bomb*, and *atomic weapons* were each accompanied by the prediction that the surface Navy would become obsolete." These words, written by an Army officer in a book considering the potentialities and effects of guided missiles, served to introduce the statement that as these implements of war were developed each one was "tested against naval vessels, yet the major powers of the world still have sizable surface Fleets and continue to build more and better warships."

Guided missiles, the Army man adds, will change the Navy's looks and actions, but surface Fleets are as important as ever. ADM A. A. Burke, USN, the Chief of Naval Operations, agrees that the shape of ships —and of the Navy—will change and tells why:

"The Navy's responsibilities—the things the Navy has to do—have never been greater than they are today. The United States has treaties with friends in almost every important overseas area of the world. I find it difficult to visualize any sea area in the world that we could afford to abandon to an enemy—even temporarily. In addition to that, the power and range of naval weapons have increased tremendously in recent years. This means the importance to our survival of maintaining tight control of the world's oceans and denying the seas to powerful enemy forces—submarines, aircraft, long-range missile ships—is greater than ever. Nothing is more important to the defense of the United States than control of the seas."

The armada of World War II ships which we have in mothballs or in operation were neither designed nor equipped to meet modern threats to our national security. CNO points out that much of this carrier and ship equipment has only limited usefulness against the weapons which might be employed in a future war.

Admiral Burke adds:

"That is why we are going in for missiles. We are installing missiles in ships just as fast as we can. Yet, we don't want to install them too fast. We don't want to build a lot of expensive missiles at one time and then find out we can get better ones. We don't want to stock up on everything this year and get nothing next year." So changes in our Navy are being made at a regulated pace, converting several older types while building a prototype for guided missiles or nuclear energy, yet the shape of the Navy is being changed as surely as the contours of a beach are changed by ocean waves. Yesterday's batteries of rifles are slowly making way for SSMs—surface-to-surface missiles which can extend the area of a ship's lethal punch while adding to the accuracy of that punch. Antiaircraft batteries are ready to acknowledge the superiority of SAMs in defending ships and shore installations against air attack. Air-to-air and air-to-surface missiles have proved themselves worthy of installation on the Navy's latest aircraft. *Petrel*, an air-to-surface missile, is ready for operational use along with many other missiles.

What effect are these new armament systems likely to have on our future men-o-war, in their shape and employment? Using the surface-to-air missile as an example, we find a difference of opinion among the experts. Some feel that all our ships should have adequate air defense, so SAMs should be installed on every vessel which can accommodate the weight and afford the space for guidance equipment, launchers, missile fuels and the missiles themselves; others feel that the Navy should follow the trend toward specialized ships—equip ships to fulfill a primary mission of air defense. Their argument: total use of a cruiser or destroyer type for air defense would be conducive to most efficient use of highly trained guided missile personnel—and more efficient AA fire. Of course, the first group retorts that the best way to lose all your eggs is to put them in one basket.

Medium-range surface-to-surface missiles, because of their size, are not very well fitted for use aboard ships of destroyer type or smaller. The present *Regulus I* is being used aboard aircraft carriers, cruisers and submarines without difficulty. The heavy cruiser USS *Los Angeles* (CA 135), *Hancock* (CVA 19), and *Tunny* (SSG 282), for example, are capable of using surface-to-surface missiles as well as conventional weapons.

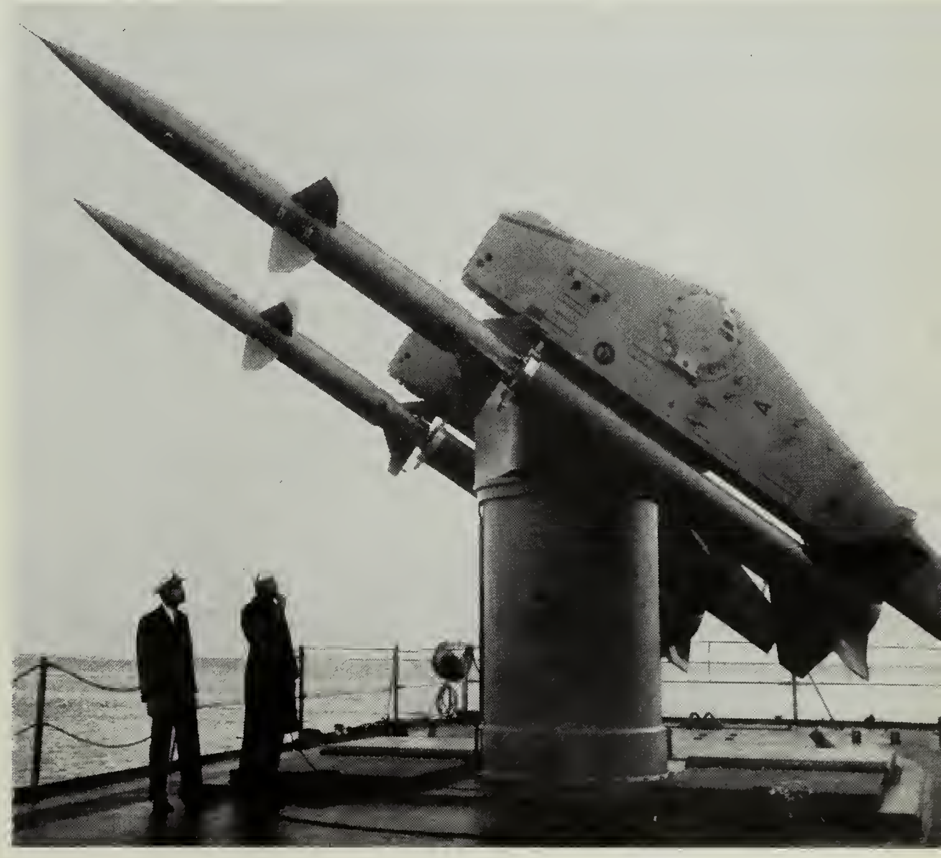
Here it might be noted that Secretary of the Navy Thomas has said that *Forrestal*-class carriers are not prototypes for any new weapons systems, but a "logical step" in the development of a proved weapon. Our present guided missile cruisers with their supersonic antiaircraft "birds" are a similar step in the development of combatant vessels.

A submarine fitted with missiles can move within target range before surfacing, then rise, fire on a distant target and drop beneath the waves again before the enemy knows what hit him. In comparison with surface vessels, present-day submarines are limited in both speed and capacity —but don't forget USS *Nautilus* (SSN 571). In the words of RADM A. G. Mumma, USN, Chief of BuShips, "she has proved herself so well that the keels for seven other nuclear-powered submarines have already been laid and construction will soon get under way on seven more. These planned submarines include a nuclear-powered guided missile submarine which will combine, for the first time in a single ship, the vastly increased stealth and cruising range provided by nuclear power together with the incredibly destructive force of the Navy's new missiles."

Both the Atlantic and Pacific Fleets now have submarines whose primary mission is the launching and control of guided missiles—but they look much like the submarines which depend upon older types of armament. Other standard ship types have long been adapted to this new weapon. The late USS *Mississippi* (AG 128), after long years of service as a "gun platform," gave up her after turret to assume the role of an experimental guided missile launching platform. USS *Norton Sound* (AVM 1) is still serving in a similar role. USS *Boston* (CAG 1) and *Canberra* (CAG 2) will be followed into Fleet service by USS *Galveston* (CLG 93), *Little Rock* (CL 92) and several additional cruisers —each with a silhouette marked by needle-nosed SAMs where once the triple guns of an eight-inch turret symbolized naval might. Other cruisers have retained the after turret, but have been modified to handle *Regulus* missiles. Missile-packing aircraft carriers and destroyers are pulling Fleet duty; while others are being modified or built from scratch.

Guided missiles will be hitched to nuclear power in the first cruiser to be designed and constructed since the end of World War II. Included in the fiscal 1957 shipbuilding pro-

TERRIER guided missiles fired from shipboard launchers against enemy aircraft are now operational on Navy ships. *Above:* air-to-air *Sidewinder*.



BIRDS FOR THE BIRDS — Air-to-air guided missile *Sparrow* now operational with the Fleet is taken aloft under the wings of a carrier based F7U-3M *Cutlass.*

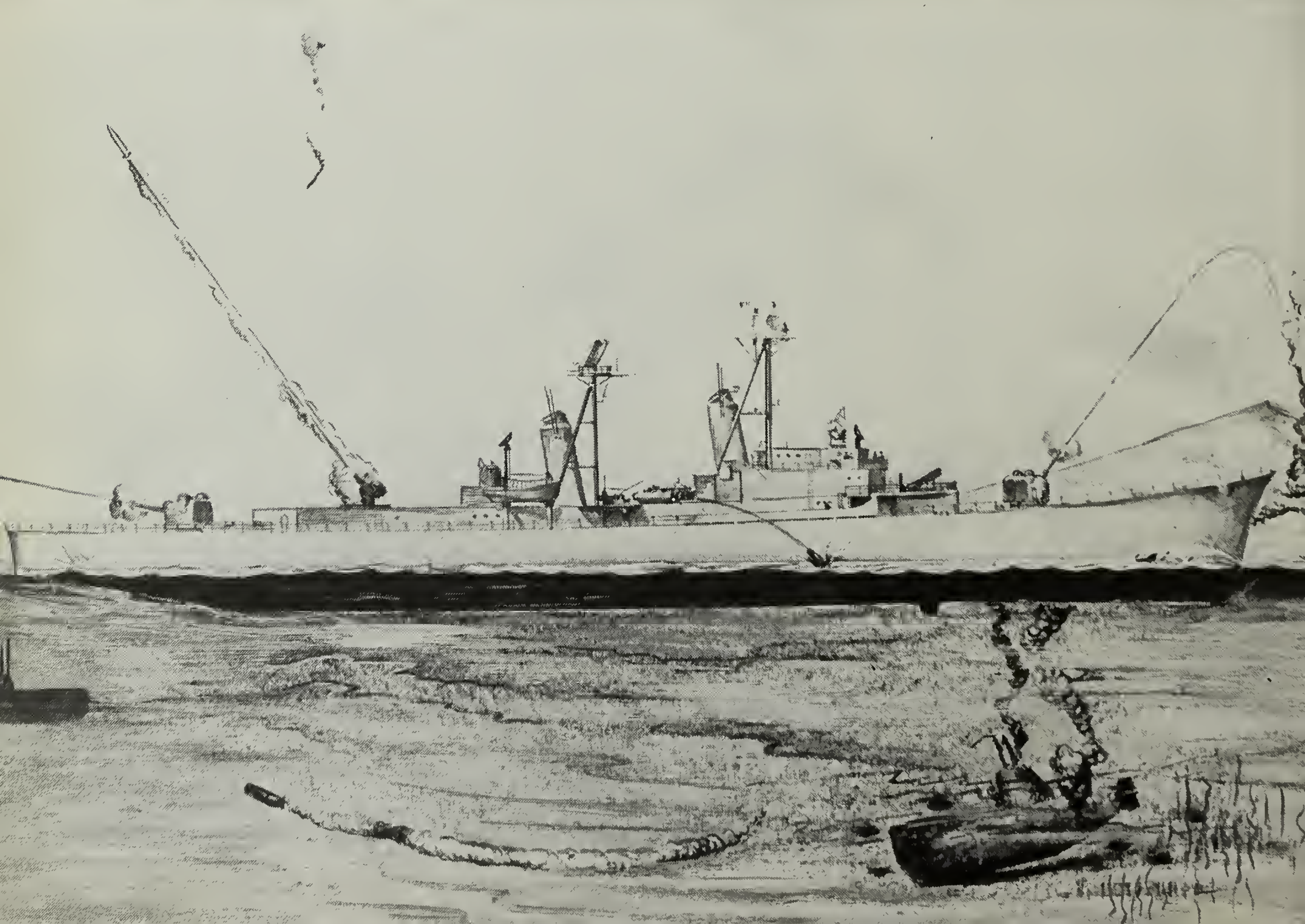
gram, this CG(N) will be approximately 700 feet long and will be armed almost entirely with guided missiles. According to Admiral Mumma the decision to build a cruiser will permit operational evaluation of nuclear power for surface ships approximately one year earlier than would have been possible with an aircraft carrier. The use of atoms for power will also allow the storage area previously used for fuel to be used for missile storage or additional fuel for missile-bearing aircraft. Use of this source of power will also permit the elimination of stacks and the introduction of other weight-reducing design efficiencies.

Again according to BuShips' chief, "Nuclear power is producing, and will continue to produce, profound and far-reaching effects upon naval ship construction and Fleet strategy. Nuclear propulsion was first incorporated in submarines because it offered greater advantages in undersea craft than in surface ships. Stealth and the ability to launch surprise attacks have been increased because of the virtually unlimited capability to remain submerged for long periods. The *Albacore*-type hull, when applied to nuclear-powered boats, will turn submarines into almost undetectable weapons against which there is almost no defense."

Naval strategy, too, will undergo a change. Shore bombardment, usually considered incidental to a Fleet's main support and protection mission, will be transformed by surface-to-surface missiles. SSMs will extend a ship's striking range far beyond that of the 16-inch gun. The intermediate range ballistic missile which can be fired from shipboard will probably be a great deal more accurate and less expensive than intercontinental ballistic missiles.

The concept of using ships as mobile bases for use in projecting the nation's power into any trouble spot has also come in for fresh em-

'PUSH BUTTON BATTLE' in future Navy is depicted by artist showing guided missile destroyer in action.



phasis. It is for such purposes as this that guided missile ships are replacing today's warcraft, and that missiles are replacing guns themselves.

Secretary Thomas recently stated that an arsenal of atomic weapons, air-to-air, air-to-ground, and surface-to-surface, is being fully assimilated. He cautions, however, that "missiles for the foreseeable future are special-purpose weapons. There will be no substitute for the versatility of the small piloted aircraft as a general-purpose weapon for attacking the great variety of fixed and moving, airborne, seaborne, and ground targets within the naval missions. Only the trained pilot on the spot can make the prompt evaluation and decision necessary for selecting targets in a fast-moving situation, or when intelligence is inadequate."

These "special purpose" weapons, despite their advantages, offer a number of problems and hazards as a basic naval weapon. Among these problems and hazards:

- Missile launch and control from a rolling ship platform—a problem which USS *Gyatt* (DDG 712) is helping solve with her stabilizing fins. Some launchers must be stabilized; for a successful launching all of them must grip a missile firmly until the moment of firing.
- Accuracy of fire for a missile-age Navy also demands a more precise navigational system than any now in use, particularly if intermediate range ballistic missiles such as *Polaris* are to be successful. USS *Compass Island* (EAG 153) and another merchant-type vessel have been assigned to work toward a solution of this problem.
- That old devil space remains a problem, since missiles require plenty of room for storage, assembly, testing and launching. Cruisers which have hangars can easily be adapted and smaller types can be converted to handle fairly small SAMs. But SSMs, IRBMs, even some SAMs, range in size and weight from that of a 16-inch shell to that of smaller Navy aircraft. And ships of WW II design are saddled with weight which was necessary when the recoil shock of rifled guns was a consideration, but is in excess with recoilless missiles. Its presence, however, cuts down on the number of missiles a ship may carry—and on the weight of launching and handling equipment.

Despite *Terrier* and *Tartar*, despite jet fighters armed with guided missiles and rockets, it will be some time before missile systems replace today's antiaircraft fire systems. Yet Secretary Thomas has pointed out that these missiles have already extended the surface antiaircraft fire zones through which any attacker must pass, extended them much wider than the few thousand yards they encompassed in World War II.

While the real shape of tomorrow's missile Navy is still on the drawing boards and in the minds of planners, Uncle Sam's sea service began its metamorphosis quite some time ago. Admiral Burke recently explained the situation this way:

"What we are doing right now in this transition period is modernizing and converting all ships. In addition, all the new submarines will have nuclear power—that has paid off. All ships—destroyers and bigger—

FRIGATE CLASS guided missile ship with primary mission to destroy air targets engages the enemy in drawing.

SHIPS of the GUIDED MISSILE NAVY

BBG-GUIDED MISSILE CAPITAL SHIP
Authorized:
None

CAG-GUIDED MISSILE HEAVY CRUISER
Commissioned:
Boston (CAG 1)
Canberra (CAG 2)

CG(N)-NUCLEAR GUIDED MISSILE CRUISER
Authorized:
One

CLG-GUIDED MISSILE LIGHT CRUISER
Under Conversion:
Galveston (CLG 93)

DDG-GUIDED MISSILE DESTROYER
Commissioned:
Gyatt (DDG 712)

DLG-GUIDED MISSILE FRIGATE
Under Construction:
Farragut (DLG 6)
Dewey (DLG 7)
Macdonough (DLG 8)
Coontz (DLG 9)
Authorized:
DLG 10, 11, 13, 14, 15

SSG-GUIDED MISSILE SUBMARINE
Commissioned:
Tunny (SSG 282)
Barbero (SSG 317)
Under Construction:
Grayback (SSG 574)
Growler (SSG 577)

SSG(N)-NUCLEAR GUIDED MISSILE SUBMARINE
Under Construction:
Halibut (SSG(N) 587)

AVM-GUIDED MISSILE SHIP
Commissioned:
Norton Sound (AVM 1)

* Accurate silhouette not shown.

will have a guided missile battery so that they can shoot down planes at 70,000-feet or 80,000-feet altitude—20 miles away. Our electronic equipment has to be very good.

"We have to do the same thing with anti-submarine equipment. We have to get anti-submarine equipment that can detect the submarine at long ranges. We have to be able to identify the submarine at long ranges, and kill him at long ranges before he kills us. It means air-launched anti-submarine missiles, depth charges that will kill submarines at greater ranges, quick ways for finding a submarine from an aircraft or from our own subs.

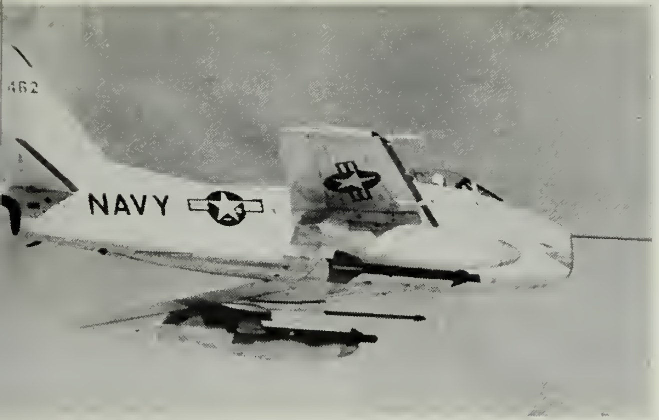
"We are in a transition period in so many things that we don't want to go all-out in many directions and literally squander billions of dollars. So we are keeping the Navy budget low. Our budget is austere. For example, we have long-range plans where we plan to build a few submarines each year. Each year nuclear-powered submarines should be a little cheaper and a little better. We want to get more guided missiles each year, a few more guided missile ships each year, one aircraft carrier each year—and we hope this year to start our first nuclear powered carrier.

"There are many things that affect plans for our Navy of the future. One of them is the technological progress we are now making. Another big one is dollars. Then, there is a question of what we can do best. We ought to have two or three different arrows in our quiver so that no matter what the enemy tries we can counter him with something effective.

"We develop our weapons as fast as we can, building them primarily on the basis of what we need, but we also take into account what potential enemies are doing. In developing these weapons to defend ourselves, we do two things. We build weapons to defend ourselves against our own capabilities, since we know about our own weapons. We also develop weapons for use against any other capability that other people have been able to devise—our friends, our allies and our possible enemies."

ADM Burke concludes, "We have to be able to meet the threat if war comes, or we will be in big trouble, world-wide."

—Barney Baugh, JO1, USN.



FLYING RATTLER—FJ-4 *Fury* takes deadly *Sidewinder* up.

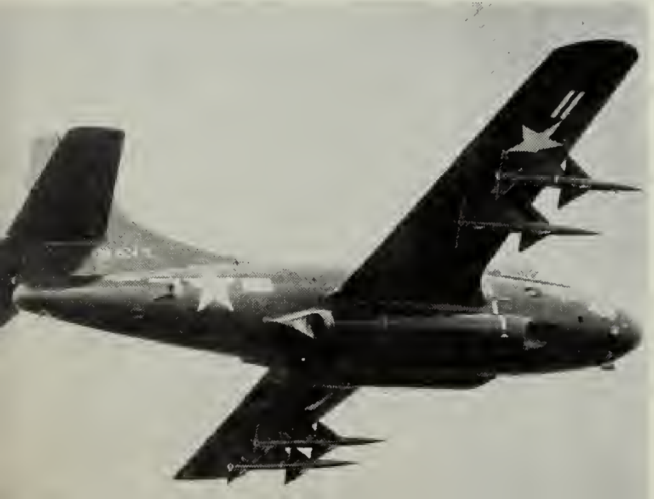
Airborne Missiles

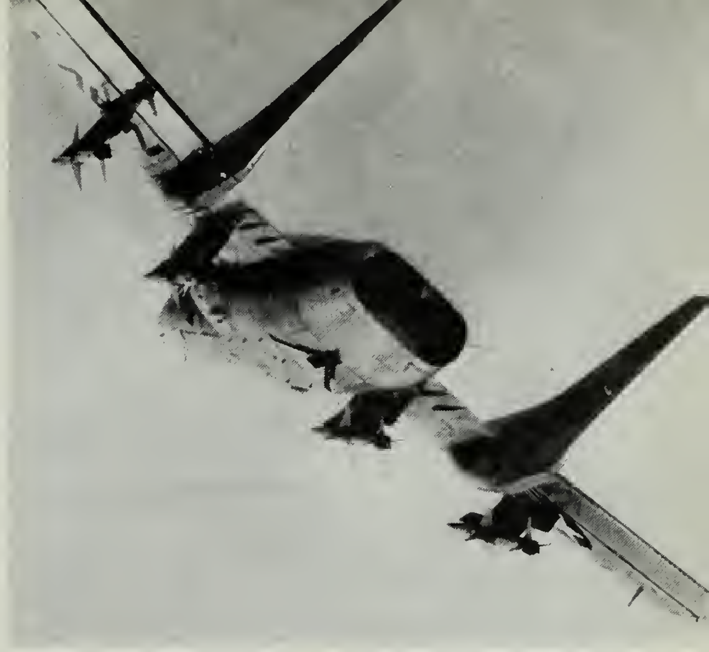
If you should get up in the air about guided missiles and future air warfare, look around and you'll find that a large field of Navy planes has already taken the guided missile airborne over the Fleet.

In case these speedy planes should be traveling too fast for a good look-see, here is a collection of missile-bearing planes that is just a sample of things to come.

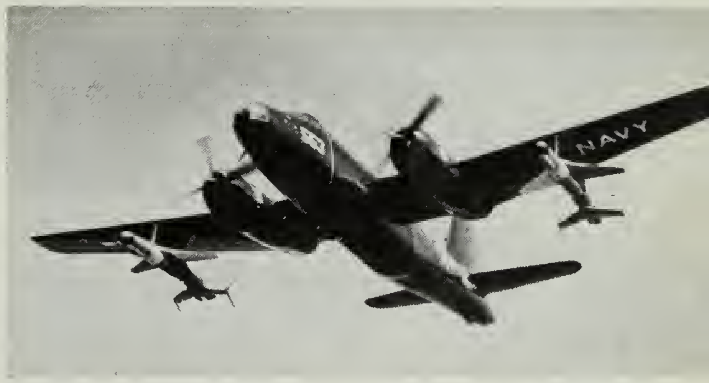
Photos represent fighters, interceptors and patrol bombers. Under their wings they will carry air-to-air *Sparrow* or *Sidewinder*. Patrol planes like P2V *Neptune* are being equipped with the *Petrel* air-to-surface guided missile designated primarily for use against ships. It can be launched well outside the target's air defense and will find its way home in spite of evasive action. All these missiles are operational with the Fleet.

COUGAR JETS, F9F-8s, fly above Fleet with *Sidewinder*. *Below:* Twin jet night fighter, F3D *Skynight*, totes *Sparrow*.

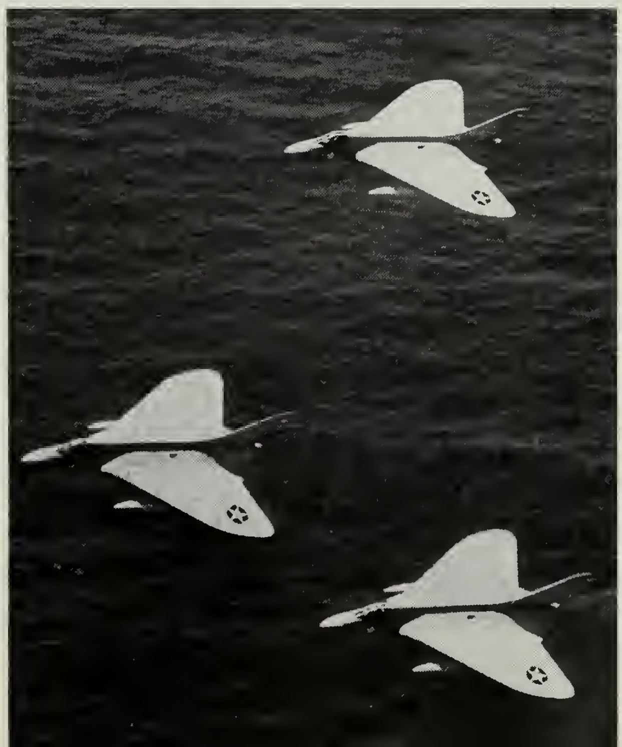




CUTLASS, F7U, slices through the sky with *Sparrow* guided missiles nested in launchers under the wings.



PETREL ON PATROL—P2V *Neptune* carriers air-to-surface guided missiles. *Below:* F4D *Skyrays* will have *Sidewinder*.



NAVY MISSILEMEN are highly trained sailors stepping into tomorrow's Navy today. *Above: Sparrow* is loaded by GFs. *Below:* GSs roll *Regulus* at sea.

GUIDANCE RADAR of *Cutlass* is adjusted

New Jobs

"THE NAVY IS JUST NOW crossing the threshold into a field which promises to revolutionize navies as much as did the discovery of gunpowder."

In making that statement, the Secretary of the Navy was referring solely to the field of guided missiles. Although the Honorable Charles S. Thomas made that quote within the past year, it's outdated already. That's because the promise of guided missiles revolutionizing the Navy is no longer a "promise" but a proven fact. If he were to speak about guided missiles in similar words today, he would most likely say that in the field of guided missiles the Navy has crossed a threshold which has not only revolutionized the U.S. Navy, but in years ahead will undoubtedly do likewise for all major navies of the world, as well as all of the branches of the armed forces.

As evidence of this are the many new types of almost unbelievable weapons and ships — and even a

IT TAKES A LOT of knowledge. and skill to get a complex guided missile such as *Sparrow* ready for 'work.'

For Our Sea-Going 'Missileers'

new-type Navyman — joining the Fleet almost daily.

Today's revolutionized Navy boasts of guided missilemen, guided missile cruisers, destroyers and submarines. Muster rolls already bear a sizable number of missiles either in operation or still in the development stage. They include the surface-to-susface missiles *Regulus I* and *II* and *Polaris*, all capable of being launched from submarines; *Terrier*, *Talos* and *Tartar*, the surface-to-air demons, which will have cruisers and destroyers as their mobile launching platforms; the air-to-surface missile *Petrel* as well as *Sparrow* and *Sidewinder*, the air-to-air missiles which are already deployed throughout the world.

Today's revolutionized "missile age" Navy requires a Navyman who is highly motivated as well as educated to assemble, test, adjust, repair and fire these deadly birds.

Without this type of highly specialized Navyman—who must have a thorough understanding of basic and advanced mathematics, physics, electricity, electronics and related sciences—today's "Navy of tomorrow" would be equipped with impressive but useless weapons. Personnel are even more important in the jet-age Navy than they were in the past.

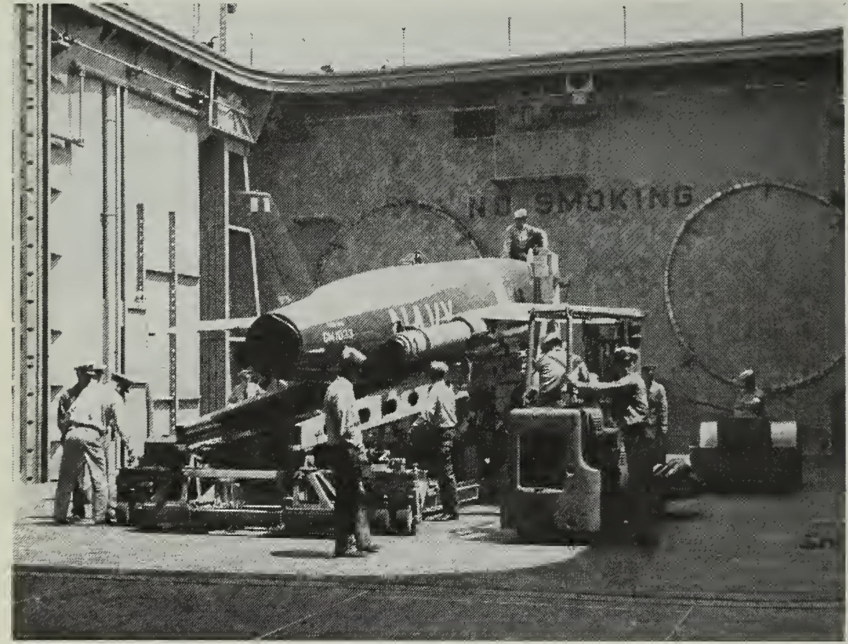
Guided missiles are highly complex weapons. Further, the missiles' testing and maintenance equipment is equally as complex as the missiles themselves. This calls for a well trained core of the operating and maintenance personnel. Accordingly, enlisted men of a very high caliber are being trained more thoroughly in a wider variety of skills than in any other period in the history of sea power.

However, the sailors of today's guided missile Navy are more than just operators and repair men. They're technicians as well. This core of well trained, versatile Navymen is built around, but not limited to, the ***Guided Missileman*** (GS) and ***Aviation Guided Missileman*** (GF) ratings. Although missilemen form the heart of the core, the ***Engineman*** (EN), ***Aviation Machinist's Mate*** (AD), ***Fire Control Technician*** (FT and AQ), ***Torpedoman's Mate*** (TM), ***Gunner's Mate*** (GM) and ***Aviation Ordnanceman*** (AO) are as equally important to guided missile operations.

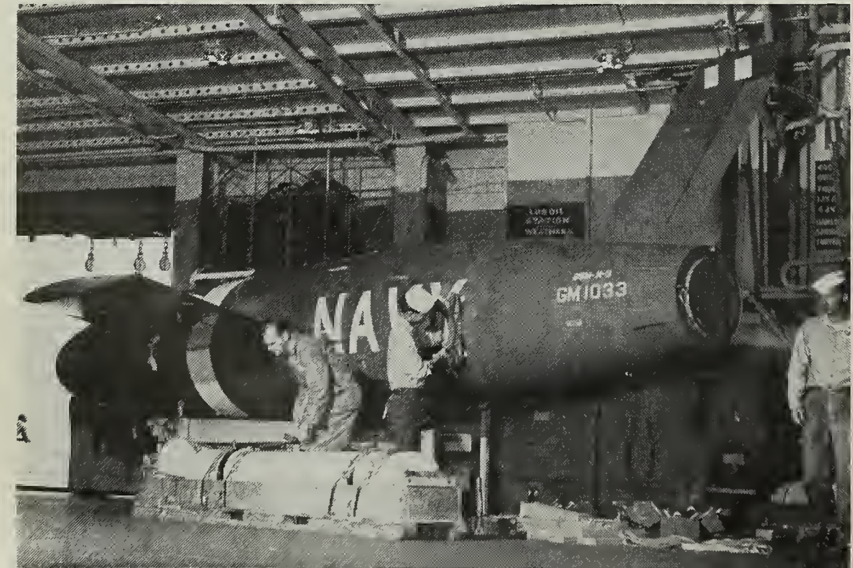
The duties of GS and GF are perhaps the least understood of all the 60-odd enlisted general service ratings. Very few officers and enlisted men in the Navy, other than those working directly with guided missiles, have an understanding of what a GS or GF actually does. The misconception of these ratings is simply due to the name "guided missileman." Without a doubt, when the average Navyman hears of the GS or GF rating, he instantly visualizes Buck Rogerish types of individuals pushing missiles around, hoisting them aboard launchers and doing nothing more than pushing a button to send them skyward.

Such is far from the case, how-

ON TARGET—Missilemen launch *Regulus,* (SSM), guided missile from launcher aboard *USS Randolph* (CVA 15). New type weapon has created new rating.



MISSILEMEN COMING UP—Missile and launcher ride elevator to flight deck. *Below:* Work begins on hangar deck where *Regulus* is rigged for flight.



ever, as these "birdmen," whether GS or GF, are basically concerned with the extremely complex internal guidance and control systems of the missile. This entails a lot of electronics. So much, that the GS and GF are occupied almost on a full-time basis with electronics instead of pushing around missiles, loading and firing them as most people believe. In fact, the missilemen have little or no connection with the more colorful or thrilling Buck Roger's phases of missile operations. Their primary job is to assemble, test, align, adjust and repair all of the missile's internal components. This involves further electronics work, just as the operation and repair of all missile testing equipment does. It all adds up to the GS and GF acting as a specialized electronics technician, who has a tremendous future.

In addition to the internal components of the missile, GSs and GFs supervise the handling and stowage of missile sections and components; maintain work logs and electronic equipment histories; and record test data and prepare reports concerning missile electrical and electronic equipment.

Although the missilemen's primary concern is with the internal guidance and control system, they also have the over-all supervisory responsibility of assembling and replacing all other components of the missile. As you most likely know, these components consist of the air frame, power plant, warhead and fuse, in addition to the missile's guidance and control system.

The airframe is the principal structural component of the missile. The various appendages, such as wings and tail surfaces attached to the airframe, together form the configuration of the missile. These wing and tail surfaces change the course and elevation of the missile in flight and maintain its "flight altitudes." The elevators control pitch, the rudder controls yaw and the ailerons control roll.

These control surfaces take different forms, shapes and positions depending on the type of missile to which they are attached. For example, a subsonic missile like *Regulus I* may have quite conventional wings and tail surfaces. It may be the latest in streamlined weapons. Supersonic missiles like *Terrier* are often more radical in design and use wings resembling fins. Supersonic airfoils (wing and tail surfaces) must have a sharp leading (front) edge on the wings whereas the subsonic airfoils have a relatively blunt leading edge. This difference is necessary because of the shock waves that occur in supersonic flight.

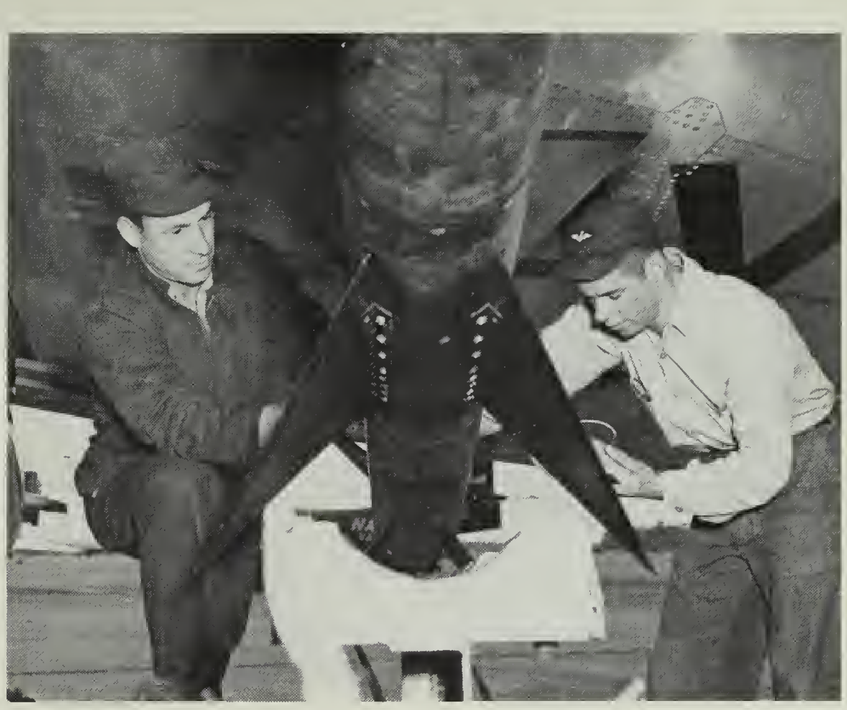
Encased in the airframe and located in the stern of a guided missile is a jet-type power plant, which consists of either a jet or rocket motor. Although there are two separate means of propulsion, both the jet and rocket motors operate on the same principle. Jet propulsion plants are divided into two main classes—mechanical and thermal.

Mechanical jet motors rely on some mechanical device, such as a pump, for the force to accelerate the working fluid to its exhaust velocity. Thermal jet motors rely on heat energy for the force to accelerate the working fluid. The heat energy is supplied by a chemical reaction, usually an oxidation process. Thermal jets have been used extensively in guided missiles and most likely will continue to be used in the future.

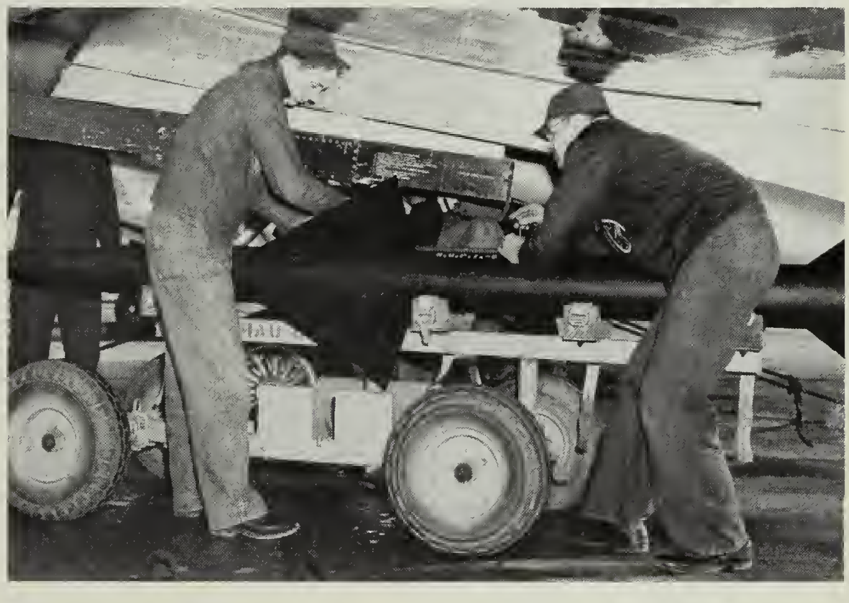
A rocket motor is a thermal jet motor that contains within itself all of the elements necessary for a chemical reaction to generate large volumes of high-temperature, high-pressure gases. Its operation is independent of the surrounding medium. Atmospheric thermal jets, on the other hand, utilize the oxygen content of the earth's atmosphere in the chemical reaction which takes place in the combustion chamber. In other words, they do not contain within themselves all of the necessary elements for a chemical reaction Therefore, they are limited to operation in the earth's atmosphere.

Rockets are classified according to the state of propellant used. The two main classes of rockets are solid-propellant and liquid-propellant. Most Navy guided missiles utilizing rocket motors are of the solid-propellant type.

In addition to the rocket motor, other types of thermal jet motors consist of turbojets, pulse jets and ramjets. Each has operating characteristics which differ rather widely from one another. Because of widely diverse requirements based upon the guidance system, launching system, size and speed of the missile, each type of jet engine has a definite application. Therefore, no one type



SPARROW SHOOTERS—Aviation guided missilemen keep the missiles firing from Navy planes. Here circuit check is made on missile in jet's launcher.



BIRDMAN'S BIRDMEN—Air-to-air guided missiles are rolled out to planes and raised to wing launchers of *Cutlass* jets of VA 86 at NAS Oceana, Va.

NEOPHYTE MISSILEMEN — Basic guided missile trainees receive instruction in electronic circuits for guided missiles.

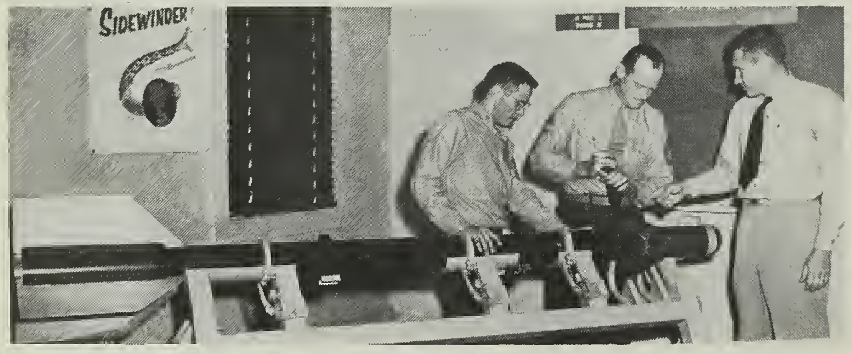
is the ideal guided missile power plant.

The operation, installation and maintenance of the missile's propulsion or power plant does not fall within the scope of the GS or GF ratings. This is where the **Aviation Machinist's Mate** and **Engineman** ratings come into the guided missile picture. The ADs are concerned with the propulsion systems of all missiles while the ENs deal only with the *Regulus* missiles.

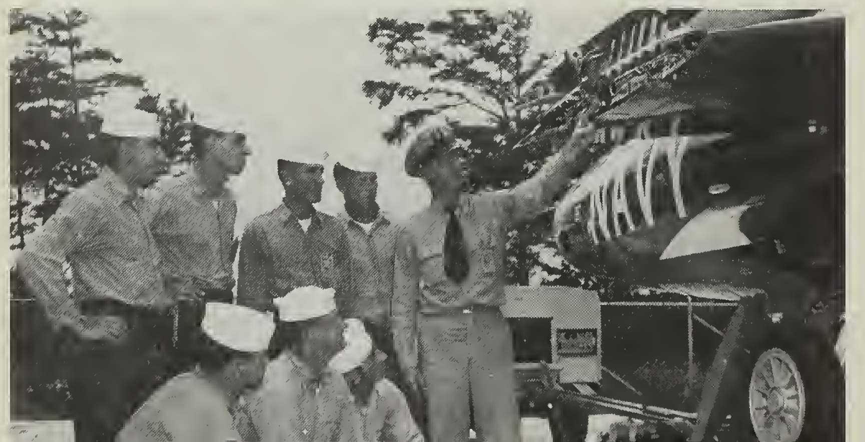
The warhead is the missile's payload and the actual reason for the guided missile's existence. The type of target for which the missile is designed is the factor which determines the type of warhead a missile will use. (For a description of the warheads and fuses see page 5.)

The responsibility for installing the explosive components in a missile is shared by **Gunner's Mates**, **Torpedoman's Mates** and **Aviation Ordnancemen**. The GMs and TMs share the surface-to-surface and surface-to-air missiles, while the AD's are in charge of the air-to-air and air-to-surface missiles. **Torpedomen** team up with the AD's to service warheads and fuses in the air-to-underwater missile *Petrel*.

The AOs, GMs and TMs are also responsible for the stowage and shipping of the missiles' warheads, as well as fuses, detonators, boosters and rocket motors. In addition, these ratings usually do the work in connection with setting the missile on its launcher. The launchers are mechanical structures that orient a missile before firing, and give control to the missile during its initial period of motion. This is done by setting the missile at the proper angle and aiming it in the direction of flight.



MORE TO MISSILES than meets the eye. *Top:* Course at NAS Jacksonville passes the word on new *Sidewinder*. *Bottom:* Students shown *Regulus* missile.



All of which brings us back to the missile's guidance and control systems that have presented problems greater than most in the history of military research and development. These components consist of all the items necessary for predicting the missile's flight path, sensing deviations from this path, calculating the kind and amount of corrections needed to return a new predicted path, translating the corrections into orders, delivering the orders to the control equipment, translating the orders into aerodynamic forces and monitoring the entire system.

Once a guided missile is launched, it comes under the "command" of **Fire Control Technician** (FT) and **Aviation Fire Control Technician** (AQ). They operate and maintain all of the missile's external control equipment while the GSs and GFs take care of the internal control and guidance systems within the missile.

The two guided missileman ratings are among the newest in the Navy's over-all enlisted rating structure. Establishment of the GS and GF ratings was approved by the Secretary of the Navy on 23 Jan 1953. Five months later, the qualifications for advancement in those ratings and the enlisted classification codes were approved by SecNav. Immediately thereafter steps were implemented for training the "birdmen" of the Navy and provisions were made for personnel of the various electronics ratings to change their ratings to GS or GF. A training program for the conversion of eligible personnel to the guided missileman ratings was inaugurated and by the end of the first year more than 150 enlisted men had transferred to these new ratings.

Today, the guided missileman conversion and training program is still in effect, but is greatly accelerated to meet increasing requirements. The program includes conversion to AQ and GF, and enables highly motivated enlisted personnel in relatively stagnated ratings to enter the new and expanding guided missile field, and at the same time they are offered an attractive and rapid path of advancement.

At present career enlisted personnel in pay grades E-4 and E-5 of the BM, GM, CS, SH, DC, CD, AB and SD ratings who have a combined GCT-ARI of 110 and a MECH or MK/ELECT of 50 are eligible to apply for the GS, GF and AQ conversion programs. Personnel in pay grade E-4 and E-5 are eligible for GS and AQ, while those in pay grade E-4 only can convert to the GF rating.

Qualified applicants may request to enter any of these conversion programs by submitting a request to the Chief of Naval Personnel in accordance with BuPers Inst. 1440.18.

Personnel selected for the GS conversion program will be assigned to a 20-week course in basic electronics at the U.S. Naval Schools Command, Treasure Island, San Francisco, Calif., and then to a 12-week missile course at either Dam Neck, Va., Pomona, Calif., or Mishiwaka, Ind. After completing both phases of the conversion training, graduates have their rating changed to GS.

Personnel selected for conversion to AQ or GF will be assigned to NATTC Norman, Oklahoma, for four weeks of Electronics fundamentals training, then to NATTC Memphis, for the AQ or GF training as applicable for a period of 24 weeks. Upon successful completion of these phases, ratings will be changed to AQ or GF as appropriate.

In addition to the schooling given as part of the conversion program, the Navy maintains approximately 10 different schools for training the officers and enlisted personnel earmarked for surface launched guided missiles. (A list of these schools can be found on page 50.)

Upon completion of training, the Navy missileman may be retained for instructor duty at one of the schools or be assigned to a guided missile ship, unit, group, research and development site or guided missile service installation.

As you have already seen, the guided missile ships currently in operation include the guided missile experiment ship USS *Norton Sound* (AVM 1), the guided missile submarines USS *Tunny* (SSG 282) and USS *Barbero* (SSG 317); the guided missile cruisers USS *Boston* (CAG 1) and USS *Canberra* (CAG 2); and the guided missile destroyer USS *Gyatt* (DDG 712). Also playing an important role is the miscellaneous experimental ship USS *Compass Island* (EAG 153).

In addition to these ships which are specifically designated as guided missile ships, GS, GF and other ratings that work with the various components of a missile can be found serving aboard aircraft carriers and a number of cruisers with guided missile capabilities.

At present the Navy maintains two Guided Missile Groups—one on the East and one on the West Coast. These groups provide mobile teams which move aboard cruisers and carriers as well as other ships capable of handling guided missiles. They move aboard lock, stock and barrel, complete with their missiles, test equipment and launching racks, much in the same manner as helicopter and drone units operate.

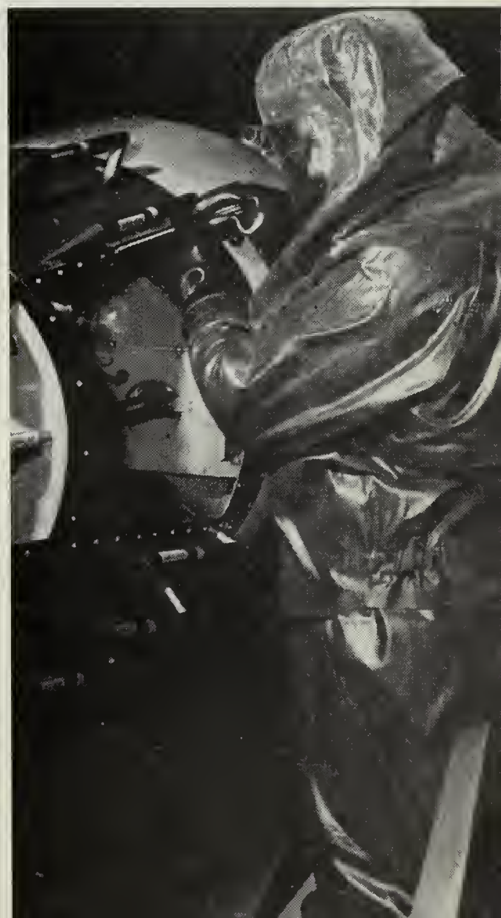
The East Coast-based group normally calls Chincoteague, Va., home while the West Coast-based group is split up. Half of the group is based at Point Mugu, Calif., while the other half is located at NAS Barber's Point, Oahu, T.H.

Supplementing the two guided missile groups are two Guided Missile Units. They are GMU 50 and 51 which handle the *Regulus* missiles for the Navy's underwater arm. GMU 50 is based at Port Hueneme, Calif., while GMU 51 services SubLant's guided missile units from its Yorktown, Va., base.

The various research and operational development sites where you will find missilemen and related ratings attached are listed on page 30. They are also quite often assigned to guided missile service support units which provide logistic support to the Navy's operating guided missile ships, groups and units. At present there are seven of these support units. They are located at Hingham, Mass.; Yorktown and Oceana, Va.; Charleston, S. C.; Crane, Ind.; and Seal Beach and Miramar, Calif.

—H. George Baker, JOC, USN

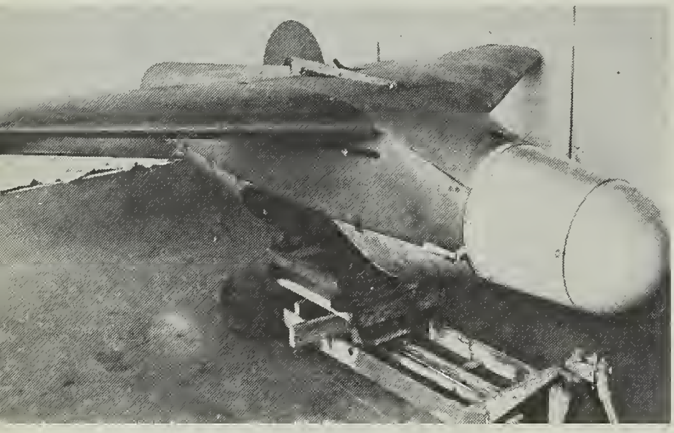
SPECIAL GEAR—Suits protect Navymen from potent missile fuels. Hose gives air for ventilation and breathing.

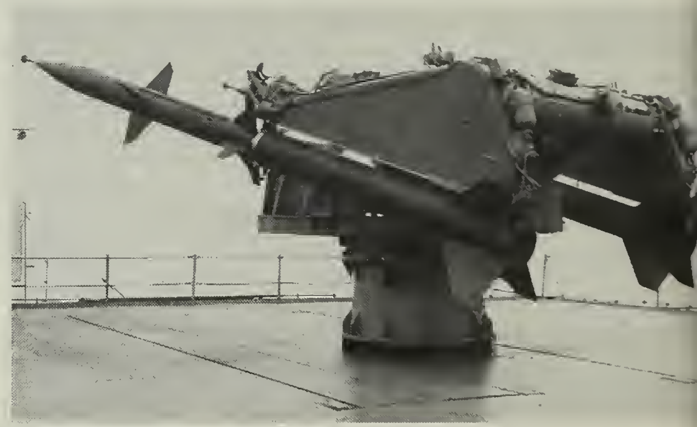


The Zooming History of Navy's

THERE'S NOT A PERSON in the world who can lay claim to having invented the guided missile. It is an instrument of warfare that just "came about" in stages, then suddenly achieved a state of development where it promised a potential far beyond that of other types of missiles. Years of work in the chemistry labs, engineering shops, on the drafting boards, by mathematicians, and countless of other professionals, have combined to give us the guided missile.

Like mountain streams growing into rivers and feeding the oceans, the guided missile has evolved from a vast flow of basic research in widely divergent fields, each independent and probably unknown to one another. When these streams of research were all put together, they provided the essentials of today's guided missile.





If you want to go all the way back in history, you might say that missiles, as such, came into being during the days of the cavemen. Caveman Hatfield aimed a rock at Caveman McCoy. Loosely speaking, that rock was one of the predecessors of the guided missile.

But up to the fairly recent past all missiles—like that rock—had one major deficiency—they did not always hit the intended target. The solution to this is really quite simple: alter the path of the missile while it's in flight so that it will strike what you want. This proved to be much easier said than done.

The guided missile, as we know it today, can be thought of generally as descending from two original forebears, the *ballistic* or *artillery rocket,* and the *manned aircraft.* Certain of today's medium and long-ranged guided missiles show clearly the predominant influence of the latter ancestor, and these have been called pilotless aircraft.

However, a much larger number, including some large and many small guided missiles are much more closely related to the artillery rocket than to the airplane. In some cases the two original types of characteristics have been so interwoven as to produce a new combination in which it is quite difficult to say which of the two original ancestors have the predominating influence.

A third type of missile, the *torpedo,* developed during the Civil War, is classified by many as the world's first guided missile. It was during this time that the gyroscope was used in an attempt to control that torpedo, but the gyros available at that time were so inaccurate that all attempts failed. But who is to deny the fact that the sound-homing torpedo of World War II is not a true guided missile?

The rocket, more closely associated in the mind of the general public as one of the forerunners of today's guided missile, has been in use since before the days of Wan Hu in the fifteenth century. (see box, page 58). Rockets brought home the fact that unless man found a way to guide them, he would never be able to utilize fully their high speed and long range.

But it was only in the early 1900s that Dr. Robert H. Goddard, of Clark University in Worcester, Mass., set down the principles of rocketry, including the problems of stabilization. These principles are still in use today in the development of guided missiles.

The Navy itself has been in the business of guided missiles for quite some time, although you may not have realized it. As early as World War I, the U.S. Navy had developed another "world's first" guided missile. Although successfully tested, the Navy's "aerial torpedo" became lost in the secrecy of World War I and was never used against the enemy.

This guided missile was described as ". . . an automatic aerial torpedo, a passengerless aeroplane, capable of flying a desired distance on a course, true and predetermined, and of descending to earth and exploding a heavy charge upon impact. . . ." Research, development and field tests of these "passengerless aeroplanes" — which were radio-controlled and looked like a biplane — were carried out at a secret airfield on Long Island. Approximately 100 of these early missiles were fired out into the Atlantic Ocean and a good number of direct hits were made on targets up to 96 miles away. They carried 1000 pounds of TNT.

Research in the field of guided missiles continued slowly after the end of WW I because of a lack of interest, lack of funds, and the primitive state of electronics.

In the 1920s BuAer was experimenting with radio-controlled aircraft. These early experiments, however, were conducted under the greatest of disadvantages: not only the lack of funds, but poor instrumentation facilities, lack of space, and hazards to their personnel.

Missiles

Despite this, it was around 1923 when the first drone (an unmanned airborne vehicle) was successfully flown at the Naval Proving Grounds, Dahlgren, Va. This early effort led to the development of the target drone for antiaircraft practice. A logical next step would be to add bomb loads to the drones and drive them into enemy targets. (This was done in World War II when assault drones played their first role in combat.)

During the '30s, the majority of the research work in the field was performed by American and German civilian rocket societies. The exchange of information and research data between these groups greatly aided the ushering in of the guided missile era.

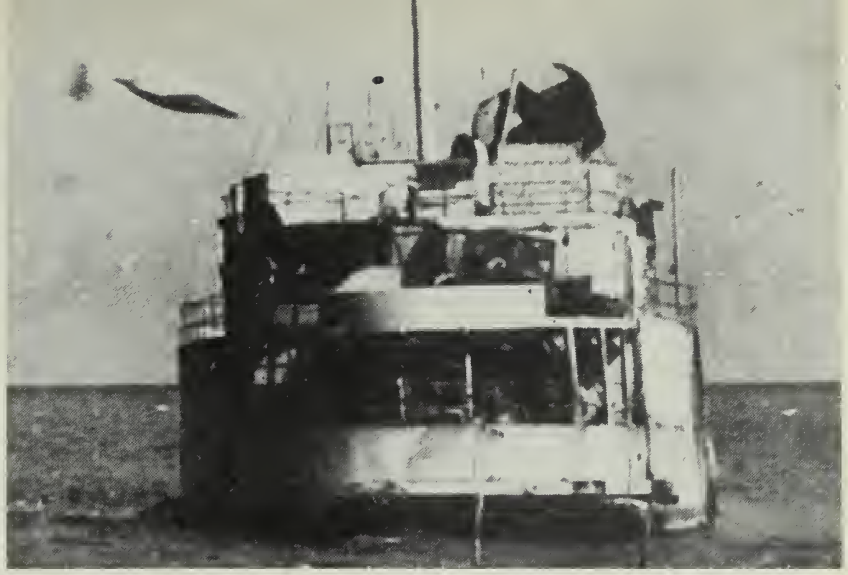
It is the Germans who are credited with launching the first actual guided missile attack during wartime. In August 1943, a British convoy was steaming through the Bay of Biscay, vigilant for enemy submarines and aircraft. The lookout on one of the ships saw what appeared to be a small fighter come out of a turn directly toward the ship at incredible speed. Antiaircraft guns were quickly brought to bear on it but because of the object's small size and tremendous speed, the guns were ineffective against it.

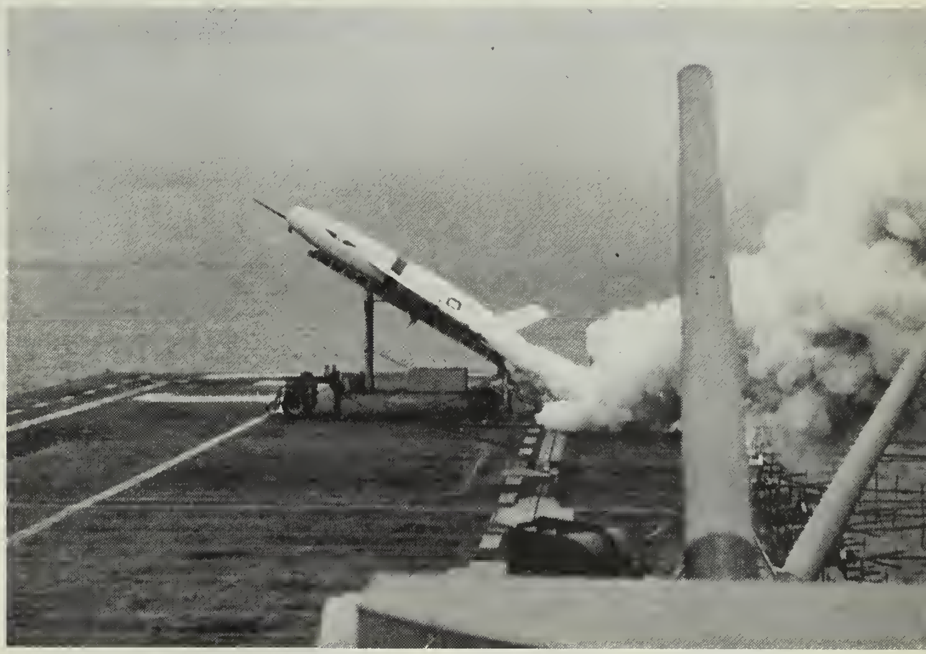
As it approached close to the ship, this "aircraft" which the lookout had spotted didn't pull out of the dive in the familiar dive-bomber fashion but continued on its course until it hit the ship and exploded.

It had been too small to carry a pilot and it had no visible means of propulsion. It executed a turn and unerringly attacked its target. Later, it was learned that this was actually a radio-controlled guide bomb, launched and controlled from a German airplane.

This incident is said to have marked the opening of modern guided missile warfare. Here, in the Bay of Biscay—less than a decade and a half ago—for the first time in the history of warfare, a radio-controlled guided missile was used.

Navy experimentation with drones of the 1920s was also to be demonstrated in battle during World War II. The Bureau of Aeronautics produced a unit in 1943 and called it





ON TARGET — *Bat,* guided glide bomb of WW II, heads for target ship. *Center: Regulus* tested in ship-board launching. *Below: USS Mississippi* (EAG 128), whose last service to Fleet was testing missiles, fires *Terrier* from stern.

an "assault drone." The news of the job the drone did against the enemy was lost in the welter of wartime headlines.

These drones, or "guided missiles" if you will, were launched against Japanese installations at Rabaul in 1943 with fairly good results, considering their infant stage of development at the time. Named the "TDR," each drone was controlled by the command system from a parent aircraft and each carried a television unit. A receiver in the mother plane showed the operator what his missile was pointing at until the final moment of impact.

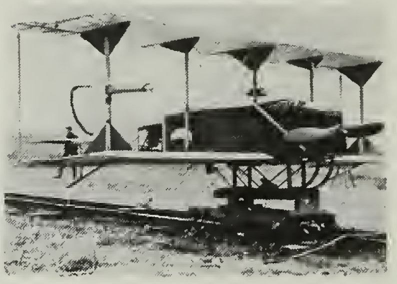
At the same time the U.S. Navy was working on the *Bat*, said to be the first *fully automatic* guided missile to be used successfully in combat by any nation. It was launched from Navy planes and directed by radar to targets miles away. It destroyed many tons of Japanese combatant and merchant shipping during the last year of the war.

This missile was a low-angle-of-flight, self-contained, airborne homing missile. It carried a bomb mounted in a glider type of air frame which was equipped with a radar transmitter and receiver to give directional correction, and a gyroscope stabilizing unit. It also had a servomechanism to move the control surface on the wing. The complete unit was suspended beneath a wing or the fuselage of the parent plane.

The idea for the *Bat* missile had come about in early 1942 at a conference between scientists and technicians from BuOrd and the men at the Radiation Laboratory at the Massachusetts Institute of Technology. The theme of the meeting had been the "bombing through overcast" problem. At this conference, Dr. David Briggs made a suggestion concerning the possibility of using radar systems in connection with a glide bomb. Research had been underway for some time on such newly discovered principles as radar homing, aerodynamics and control of glide bombs. Combining these various discoveries ended in

Picture Story of How the Navy Guided

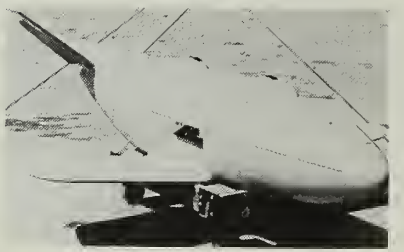
WW I Aerial Torpedo



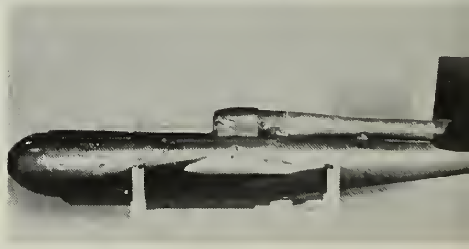
Razon (Guided Bomb)

Bat

Gargoyle



Katydid



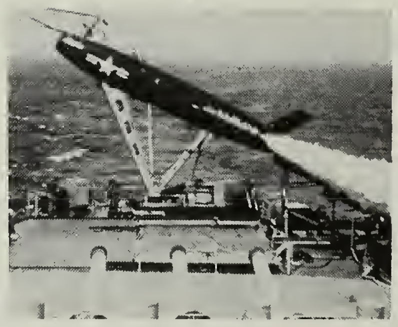
Loon

Lark

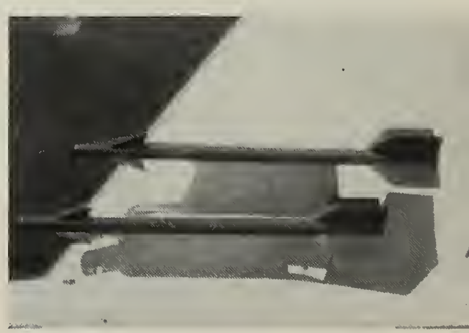
Firebee

Petrel

Regulus



Sidewinder



the production and use of Navy's *Bat*.

The production of the *Bat* was a fine example of the cooperation necessary then and carried on to an even greater degree later to produce today's guided missiles.

Just about every major bureau in the Navy has a part in the guided missile program. BuOrd and BuAer are primarily concerned with missiles development. BuShips is concerned in launching and installation problems. BuPers has the job of training the personnel. The Office of Naval Research coordinates efforts in basic research and finally, the whole program is operationally coordinated by the Director, Guided Missiles Division, under DCNO for Air. To go even a step further, on the Department of Defense level, the research and development of guided missiles by all three services is coordinated by a Special Assistant to the Secretary of Defense for Guided Missiles.

The photos on these pages tell pictorially the history of guided missiles in recent years. One of the first basic research programs started by the Navy was the Bumblebee project. Some of the more outstanding missiles to come from that program were *Terrier* the surface-to-air antiaircraft missile now in operational use, and *Talos*, another surface-to-Air AA missile.

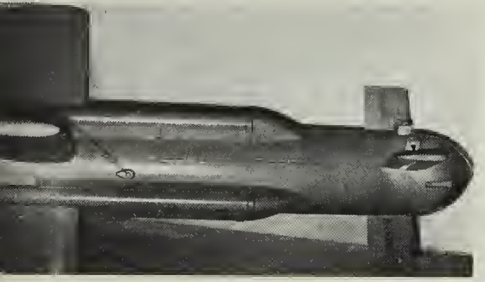
And to give you an idea of where these projects can lead, *Bumblebee* project also produced the ram-jet engine, the "flying stovepipe" with a speed greater than 1500 mph. Technical direction of the *Bumblebee* project was under the Applied Physics Laboratory of John Hopkins University. Included in the program were some 20 other agencies.

Of course, no single outfit is completely responsible for developing any guided missile. Private and government laboratories, universities, industry, contract scientific groups and Army, Navy and Air Force test ranges have duties which vary from pure research to mechanical engineering.

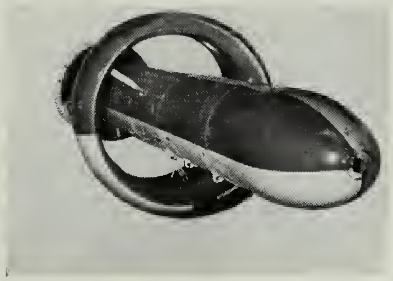
As you can see, the basis for most

Missile Developed Its Present Shape

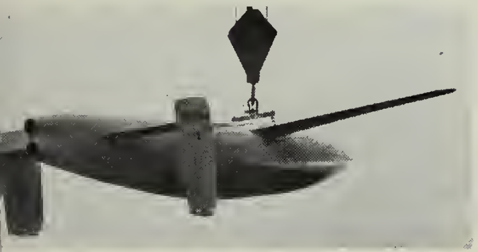
Little Joe



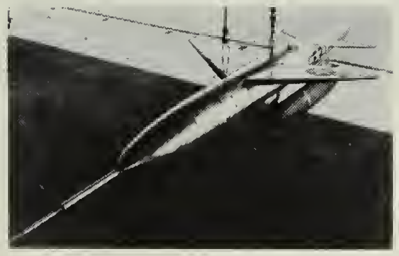
ROC



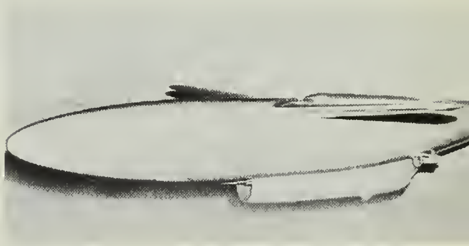
Gorgon (KU3N-2)



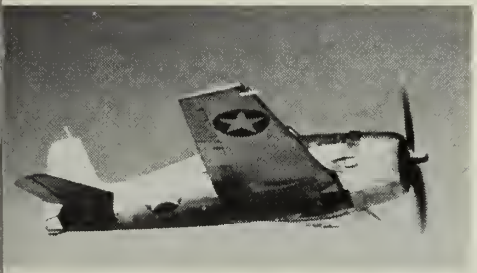
Early Gorgon



TD2N-1

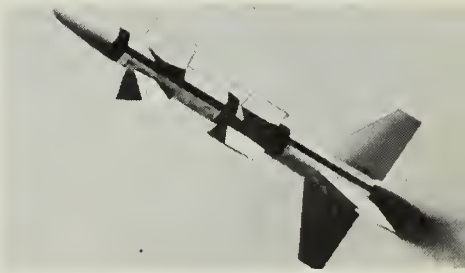


Drone (Hellcat F6F)

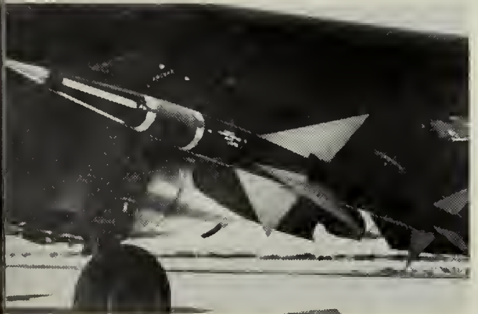


Rigel

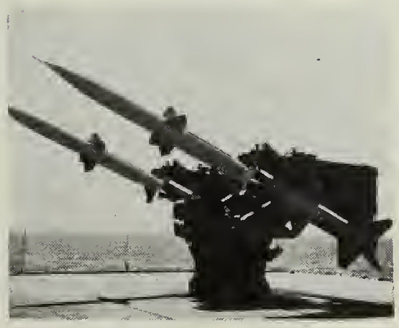
Talos



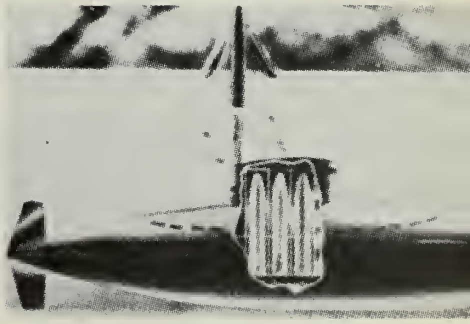
Sparrow

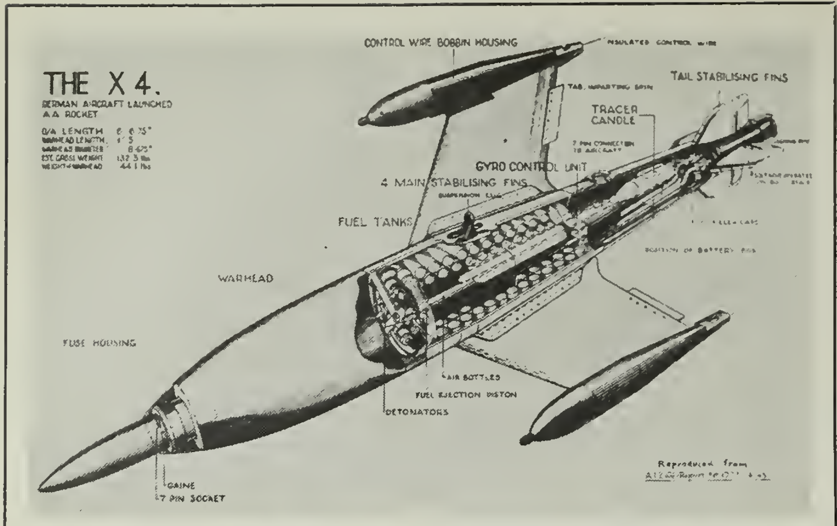


Terrier

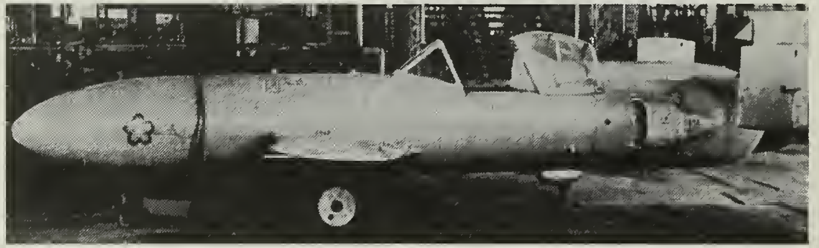


Polaris





AXIS EFFORTS in missile field during WW II had great influence on missile development in U.S. *Above:* Nazi air-to-air guided missile designed to down Allied bombers had just gone into production when war ended. *Below: Baka* 22, Japanese suicide bomb used on ships, guided by pilot.



WW II *BAT* bomb breaks away from SBS2

of the work and production in guided missiles is research. A prominent physicist, who has worked with guided missiles for many years, compiled an offhand list showing that missiles development involves research problems in such fields as aerodynamics, combustion, propellants, gyros, servo-mechanisms, radar, electronic components, radiowave propagation, telemetering, proximity fuses, shaped charges, warhead fragmentation and damage probability, upper-air combustion and interplanetary navigation.

Research and development in guided missiles sustained its momentum after the close of World War II since efforts up to then clearly indicated that only the surface of this vast field had been scratched. Late in World War II, Point Mugu, some 60 miles north of Los Angeles, was established as the Navy's Air Missile Test Center (see page 34). This was one of the first guided missile test and evaluation centers ever established.

The earliest missile project undertaken by this station was testing of the KUW-1 *Loon.* This was the Navy version of the well-known German missile V-1 or buzz bomb. The German models of the V-1 were not true guided missiles since they flew a pre-set course which could not be altered after launching. The versions tested at Pt. Mugu incorporated radar and radio guidance.

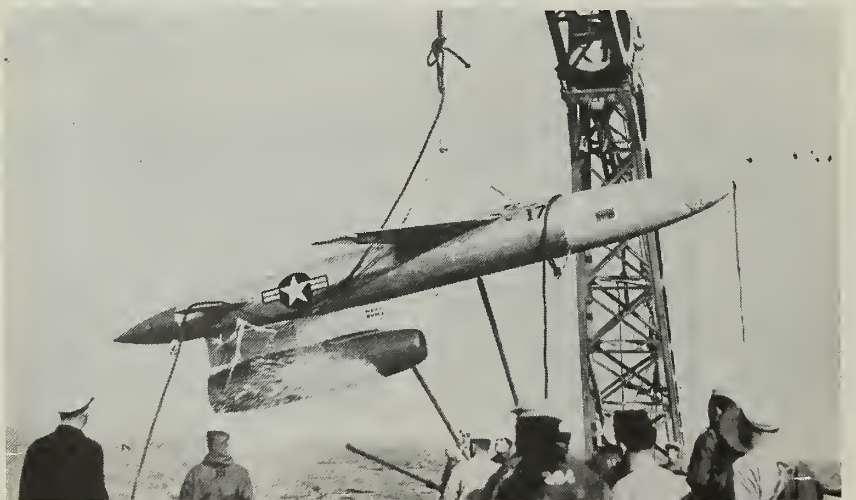
Other early missiles with which the Pilotless Aircraft Unit (as it was then called) worked included *Little Joe, Gorgon* and *Gargoyle. Little Joe* and *Gargoyle* were pioneering efforts in the missile field and never did reach the operational stage. However the glide bomb *Bat,* a successor to *Gargoyle,* was put into operation in the latter months of WW II.

Gorgon was another development of the *Gargoyle* but incorporated a jet engine for propulsion and television for guidance. This missile is believed to have been the first of the more modern type of air-to-air missiles typified today by missiles of the *Sparrow* family.

Little Joe was designed for launching from land or shipboard sites against aircraft. It was developed primarily for use against the Japanese kamikaze and baka bombs but never did see action.

Other missile projects in which NAMTC has played a role include *Lark* and *Regulus. Lark* project was concluded in 1952 and *Regulus* is now in operation.

GORGON *IV* experimental guided missile is hauled back on board mother ship after flight during studies of ram-jet engines used as missile power plants.



send an enemy ship to its watery grave.

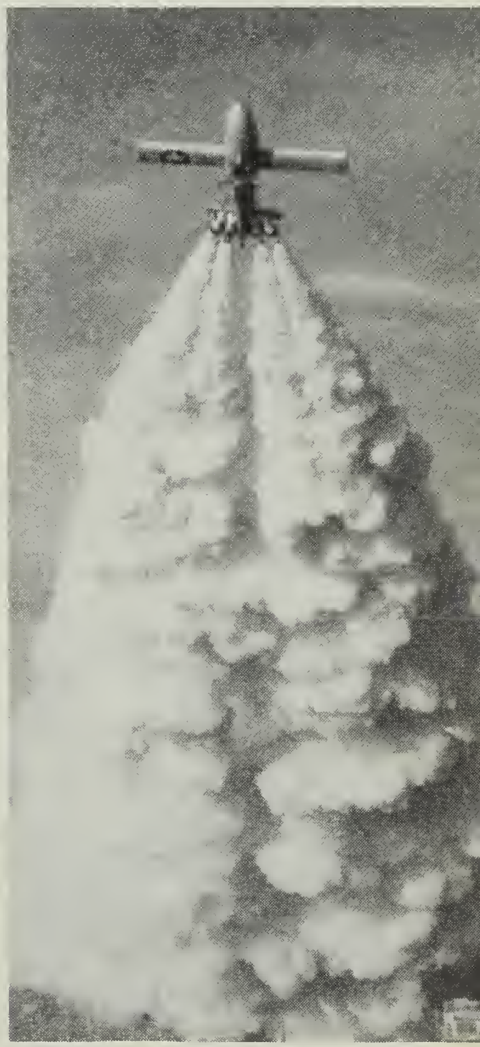
'EARLY BIRDS' — Navymen attach an air-to-surface guided missile to parent plane in 1946 experiments. *Below: Loon* missile is tested in JATO take-off.

Some miles to the east of Mugu is another vitally important Navy activity, the Naval Ordnance Test Station, Inyokern, Calif., better known as China Lake. The scientists and engineers here have been working for years, testing, evaluating and developing rockets of all sorts.

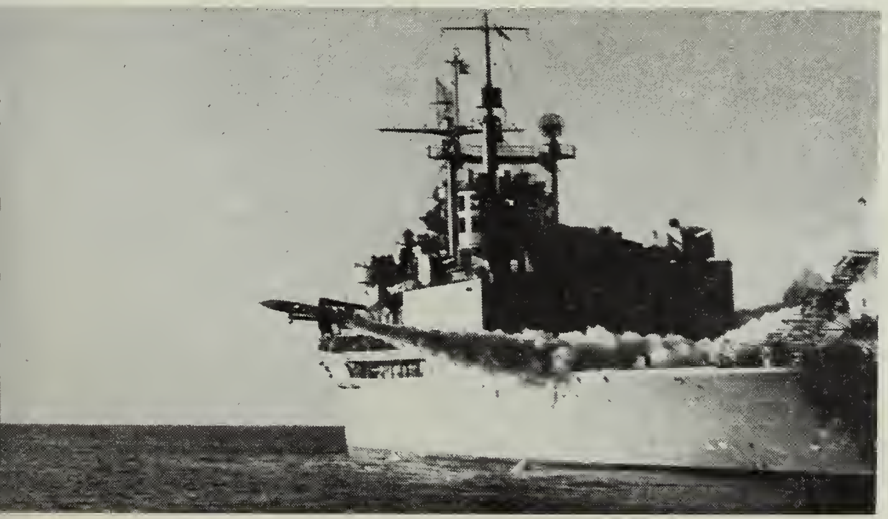
One of the results of their work has been the development of a five-inch rocket with a small guidance unit. Since this air-to-air missile was born in the desert and is quite deadly, it was named *Sidewinder.*

Many other "firsts" in missile development are credited to the Navy. As Rear Admiral James S. Russell, USN, Chief of BuAer, recently pointed out, "The *Lark* was the first surface-to-air missile known to have destroyed a target aircraft; the *Sparrow I* was the first all-weather air-to-air missile system to become operational; and the *Regulus I* was the first ship-launched, surface-to-surface missile to become operational."

Another "first" has also been reached. The Navy, along with the other services, has taken its first steps into the vast, unexplored ocean of the atomic and guided missile age. The origin of the guided missile may be difficult to pinpoint, but like the stream turned into river and pouring into oceans, the years of research and study in so many and varied subjects has given the world its first true guided missiles, and very possibly, in our lifetime, interplanetary travel. —Rudy C. Garcia, JOC, USN.



PIONEER MISSILE SHIP — *USS Norton Sound* (AVM 1) is a veteran among Navy's missile ships. Here, she launches the *Loon* in early missile tests.



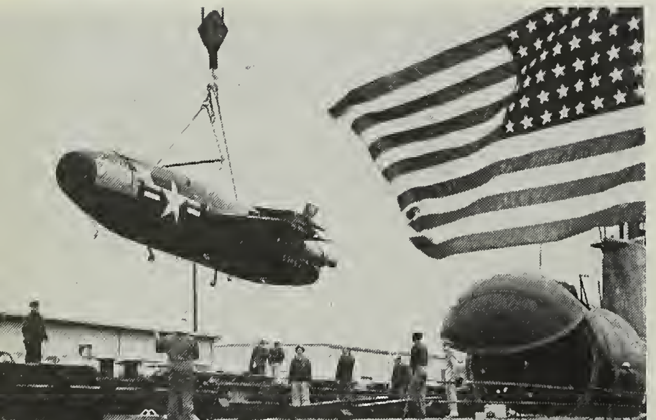
Davy Jones' Locker Stocks

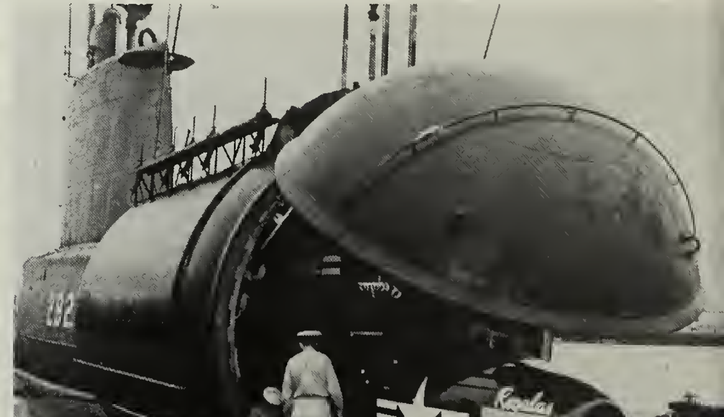
THINGS HAVE BEEN happening down in the realm of Davy Jones that have caused him to sit up and take notice. It was bad enough (he thought) when Navymen began to sail through his domain in large "tin fish" but now Davy's sense of security is "shook" to its roots by the sight of atomic powered and guided missile submarines slicing through his watery world.

In addition to the guided missile ships that Navy has working topside there is a growing group of submarines carrying deadly long-range guided missiles through the waters below. USS *Tunny* (SSG 282), shown on these pages loading and firing her missiles, and USS *Barbero* (SSG 317) are already with the Fleet. Two more, USS *Grayback* (SSG 574) and USS *Growler* (SSG 577), are being converted to join these undersea missile masters.

Tunny and *Barbero* carry the *Regulus* missile in round watertight hangars on their decks just aft of the conning tower. In a matter of

CANNED MISSILES — *USS Tunny* (SSG 282) takes aboard her missile might, *Regulu*



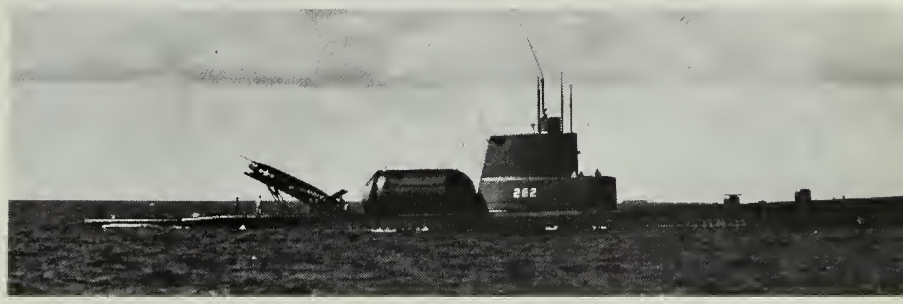


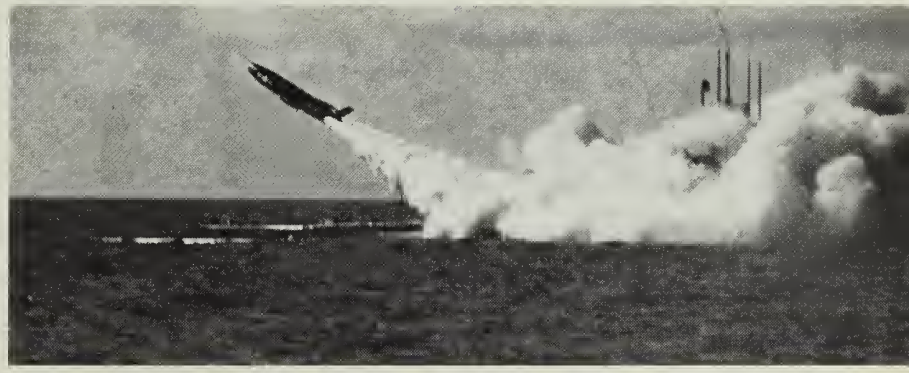
Missiles Too

minutes after surfacing, their crew can roll out and launch *Regulus*, sending it roaring toward a target hundreds of miles away.

The new guided missile *Polaris* now being developed will further increase the submarine's importance in the missile Navy of tomorrow.

As if this wasn't enough to make Davy Jones abdicate, the Navy is now working on its first nuclear powered guided missile submarine, USS *Halibut* (SSG(N) 587) shown in artist's conception at top left.





nd fires it in tests on the high seas.

USS BOSTON (CAG 1), Navy's first guided missile cruiser, heads out to sea, *Terrier* missiles poised on stern.

A Report on the World's First Guided

THE TERMS *lock on, track* and *launch* are not a part of the normal language of most Navymen, but to the Navy's new breed of men, of which the guided missileman is representative, they're familiar, everyday terms. They describe three steps in launching missiles on board the growing Fleet of guided missile ships

There's quite a story behind each one. The roster of the present guided missile surface ships—the two cruisers, USS *Boston* (CAG 1) and *Canberra* (CAG 2), the destroyer *Gyatt* (DDG 712) and the experimental ship *Norton Sound* (AVM 1) —will soon be obsolete, but these names will live for years to come. The same goes for the guided missile submarines, USS *Tunny* (SSG 282) and *Barbero* (SSG 317)—discussed on page 24. They do not have spectacular dimensions, nor do they have the glamor of *Forrestal* or *Nautilus*, but they carry within them the promise of the future.

There were plenty of problems connected with the guided missile ship conversions as discussed in the article beginning on page 6, and the considerations which had to be weighed by BuShips are indications of the shape of ships to come.

Those guided missile ships now in commission have undergone an extensive face-lifting to enable them to carry their new loads. They must have enough space for storage, for assembly, for testing and for launching their missiles. Each missile, for example, requires from 250 to 1000 cubic feet for storage.

Various ships are scheduled to receive missile equipment in the next few years. Some will be of the portable type; most will involve major permanent ship conversions.

Where the portable missile installation is used, major structural changes will be unnecessary. Installation can be made without disturbing other armament, and launchers can be removed with equal ease. However, it is still necessary to provide weight compensation for the missile installation.

Most of the electronics checkout equipment needed for these portable installations is placed aboard in portable vans, eliminating the need for stowing this gear on the ship as individual items.

On the other hand, a major ship conversion is necessary for permanent missile launchers. This means a long shipyard session. Here, actual

AS TEST SHIP *Norton Sound* has fired many Navy guided missiles and rockets including the king-size *Viking*.

structural changes must be made to give the needed weight compensation and allow space for the launching equipment. The vast amount of electronics gear that must go into these permanent conversions also makes it necessary to remove some of the "old" in favor of the "new."

Here are some of the problems peculiar to guided missile conversion:

- Whether fixed or portable, the launchers must be stable and must be able to grip the missiles firmly to prevent damage and give split-second release at the instant of firing.
- All of the fuels used for the missiles are fire hazards and some are toxic. For the first time several explosives are handled in one magazine. This means new arrangements and new handling procedures.
- The deck below the launcher must be stable enough to withstand the heat of the jet blast. If an accident or misfire occurs, the ship has to be capable of absorbing shock.

Missile Ships

Testing and developing missiles aboard ship is the only sure-fire way to get better missiles, as has been proved in the conversion of two heavy cruisers, a destroyer and a seaplane tender.

Here's a brief rundown on four of the ships playing a big role in the new Guided Missile Navy.

USS Norton Sound (AVM 1) is one of the first ships converted to handle and launch guided missiles.

HIGH TEST — Navy surface-to-surface guided missile roars off its launching platform on a test flight using JATO rocket bottles to speed its getaway.

The first ship designed and built from the keel up as a seaplane tender, *Norton Sound* was launched 28 Nov 1943. In early 1945, she earned her first engagement star for the assault and occupation of Okinawa. For her support in the Third Fleet operations against Japan she earned her second star. (She also earned eligibility for the Navy Occupation Service Medal, Asia, and the China Service Medal Extended.)

Known as the "sea-going laboratory" after her conversion from AV to AVM (Guided Missile Ship), *Norton Sound* has carried out experiments with a number of guided missiles and rockets. She first fired the *Loon*, then the *Aerobee*, *Terrier* and later the *Regulus*. Below deck, *Norton Sound* has equipment that approaches the status of a laboratory. Topside, her launchers and special equipment have handled the *Viking* and many other missiles.

Further guided missile testing is being continued with USS *Boston* (CAG 1) and USS *Canberra* (CAG 2).

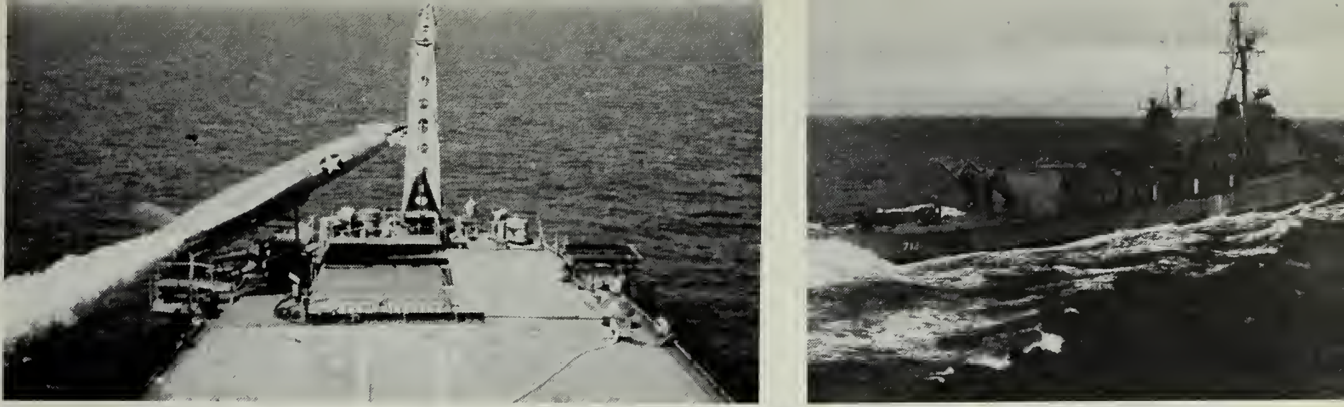
USS Boston is the sixth Navy ship to bear that name. She was launched 26 Aug 1942, as a *Baltimore* class cruiser and saw World War II service with Task Force 58 at Eniwetok Atoll, Marshall Islands, for which she was awarded the Asiatic-Pacific Campaign Medal. She later took part in the first raid on the Palaus and the Western Carolines, then saw service in Western New Guinea, the Marianas, Western Caroline Islands, Leyte, Luzon, Iwo Jima, and Japan. She was awarded the Navy Occupation Service Medal, Asia, and 10 engagement stars with the Asiatic-Pacific Campaign Medal.

In 1946, she was taken out of commission in the Pacific Reserve Fleet at Bremerton, Washington.

Boston was later ordered to New York for conversion and in November 1955 was recommissioned as the

FORMER SEAPLANE TENDER USS *Norton Sound* (AVM 1) now has the unusual job of seagoing guided missile lab.

848



USS GYATT (DDG 712) cruises Atlantic. *Right:* Regulus SSM guided missile is readied on fantail of a cruiser.

first surface-to-air guided missile cruiser. Her length is 673′; she is armed with six eight-inchers, 10 five-inchers, and antiaircraft guns in addition to *Terrier* missile launchers.

USS *Canberra*, another World War II veteran with a guided missile future, is also a *Baltimore* class cruiser. She was launched as CA 70 on 19 Apr 1943.

She saw action in Western New Guinea, the Marianas, Western Caroline Islands, Hollandia and Leyte. As a result of the Leyte Operation *Canberra* was forced to return to Boston for repairs and then joined the Mothball Fleet at Bremerton (carrying seven stars on her Asiatic-Pacific Campaign Medal).

In 1952, *Canberra* went to New York for conversion and, in June of that year, was recommissioned as the second surface-to-air guided missile cruiser, CAG 2, with a battery of *Terrier* launchers.

USS *Gyatt* (DDG 712), the Navy's guided missile destroyer, recommissioned on 3 Dec 1956 as a "390-foot destroyer with a weapon equal to that installed in a 45,000-ton ship," was originally commissioned on 2 Jul 1945 as DD 712.

Gyatt operated with the Atlantic Fleet for 10 years until she reported to Boston on 1 Nov 1955, for decommissioning and conversion as a guided missile ship.

Profiting by tests and experiments on other missile ships, *Gyatt* is the only ship of her class sporting a *Terrier* launcher.

She is also the first of the destroyer force of "giant killers" to have stabilizing fins to give more accurate firepower.

Another important first for *Gyatt* is her use of the horizontal stowage of missiles on a revolving circular magazine. This allows for more efficiency of missile-handling.

These conversions stand as only a few in the Navy's missile Fleet. The Navy, in its program for fiscal year 1957, is following the proven method of solving missile problems by trial installation and tests. Among other Navy ships scheduled for new construction or conversion in the 1957 budget are CLGs, DLGs and DDGs.

The Navy's guided missile force may also count on additional strength through such ships as USS *Hancock* (CVA 19), *Midway* (CVA 41), *Helena* (CA 75), *Los Angeles* (CA 135), *Macon* (CA 132), and others. Although these ships are not included in the guided missile category, they are known to be capable of launching missiles.

Thus it's plain to see that guided missiles are slated to play an increasingly important role in the Navy's shape of ships to come.

—Charles A. Robertson

MISSILE MISS — *USS Canberra* (CAG 2). *Left: USS Mississippi,* now scrapped, launches *Terrier* missiles.

Test Centers Keep Missiles on the Go

WHERE DO GUIDED MISSILES come from? Who does the research and development? The answer becomes a little complicated.

In the Navy Department, the responsibility is borne by three Bureaus—the Research and Development Division of BuOrd, the Guided Missile Division of BuAer, and the Shipbuilding and Ship Maintenance Division as well as the Electronics Division of BuShips.

The Bureau of Ordnance and the Bureau of Aeronautics approach the problems they face quite differently. BuOrd problems are referred to educational and scientific institutions or to Ordnance Laboratories. BuOrd may, for example, award a contract to one of these agencies to determine feasibility of and to develop a certain kind of missile, offering them a more or less free hand in the necessary research. The actual work is done by the institution, subject to Bureau approval.

On the other hand, BuAer follows the policy of decentralization of assignment of projects directly to the manufacturers.

Several ranges have been set up by the Department of Defense for testing guided missiles and all of these ranges have an elaborate network of instruments to observe the action of the various missiles. Many differences exist in the individual setups of these ranges because each has different problems to investigate.

Here's a brief summary of the more prominent:

- ***White Sands Proving Grounds***—This is located about 25 miles east of Las Cruces, New Mexico, is administered by the Army's Ordnance Corps, and staffed by Army and Navy personnel.

The *Naval Ordnance Missile Test Facility* was established by BuOrd with base facilities at White Sands. The Navy has also sponsored additional base facilities which include missile assembly, machine shops, storage, BOQs, access roads and launching facilities for *Aerobee* and *Viking* (which are upper air research vehicles) and surface-to-air missiles.

Instruments for observation extend for about 45 miles up range of the launching site, sufficient to provide adequate coverage for missiles traveling the entire range of about 100 miles. Tests are conducted on:

Vertically fired missiles;

Missiles which reach altitudes of more than 60,000 feet;

Surface-to-surface missiles with ranges of from 25 to 70 miles.

- ***Holloman Air Force Base,*** also located in New Mexico not far from White Sands Proving Ground, is the only guided missile test range at which no naval personnel are stationed. It is administered and staffed by Air Force personnel. The firing range is the same acreage as that used by White Sands and permits testing to ranges of some 50 miles. Holloman tests four types of missiles: surface-to-surface, surface-to-air, air-to-air and air-to-surface.

- ***Point Mugu, Calif.,*** officially designated as the *Naval Air Missile Test Center,* is described in some detail on pages 34 to 37 of this issue.

Point Mugu, located on the shore of the Pacific Ocean about 60 miles northwest of Los Angeles, was selected as the site for the Center because of its favorable year-round climate, the availability of a deep and extensive ocean area for a test range, and offshore islands for instrumentation stations.

The mission of the U.S. Naval Air Missile Test Center, Point Mugu, is to test and evaluate guided missiles, their components and related weapon systems; to operate aerodynamic test equipment as required; to provide initial training for specified personnel and nucleus Fleet units in the preparation, maintenance and operation of new guided missiles; and to provide technical services support for Fleet Activities designated to assist NAMTC in the performance of the basic test and evaluation mission.

Missiles are fired seaward from the shore or are launched from or

OUT OF THIS WORLD—Navy's *Viking* rocket undergoes adjustments prior to launching during high-altitude tests at White Sands Proving Ground.

CHINA LAKE Naval Ordnance Test Station has job of checking missiles. It is located in the California desert area.

near San Nicolas Island. Types tested are: air-to-air, surface-to-surface, surface-to-air and air-to-surface.

• **China Lake, Calif.,** known informally as NOTS, or *Naval Ordnance Test Station,* is a completely equipped research and development test station for various types of ordnance material, especially rockets and guided missiles. It is staffed by highly skilled scientific and technical personnel to carry out research, development and testing in a broad field of interest to ordnance application.

One range is used primarily for guided missiles. It covers a pie-shaped sector of about 25 degrees extending about 35 miles. The range offers a complete system of communications and is equipped for radar, optical, and Doppler tracking; and for telemetering. Emplacements and launchers for various types of missiles have been constructed. Details of China Lake may be found on pages 59-63 of the March 1956 issue of ALL HANDS.

• **Chincoteague, Va.,** is the site of the *Naval Aviation Ordnance Test Station.* Administered by BuOrd, it was originally established to provide a location on the East Coast where tests of aviation ordnance could be made, but the mission of the station has since been extended to include guided missile tests.

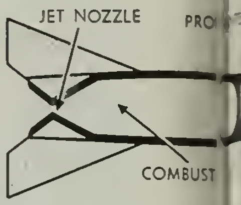
The land range consists of a one-by-five-mile strip about five miles from the station and the range can only be reached by boat. There is a sea range operating area 50 miles east of the station over the open sea. In addition, there is a 16-mile sea range extending parallel to the beach. Chincoteague is the Navy's principal facility for testing air-to-surface missiles.

• **Patrick Air Force Base,** Cape Canaveral, Fla., is the long range proving ground for the Armed Forces. The Navy currently maintains a small *Naval Unit* for liaison purposes at this activity. By mutual agreement between the governments of the United Kingdom, the Bahamas and the United States, instrument stations have been located on various islands within the Bahamas to detect a missile's passage. The entire range is under visual and radar inspection during test flights to avoid the possibility of missiles colliding with aircraft or landing within the vicinity of any surface craft. Should the controls fail, the missile is destroyed in the air before leaving the safe range area.

CHINCOTEAGUE SAILORS at Aviation Ordnance Test station send *Regulus* off on a guided cruise over Atlantic.

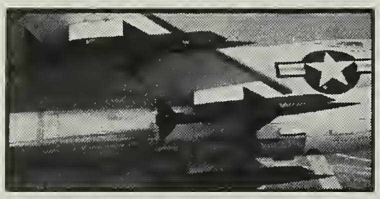
THE GUIDED

Capable of Destroying an Enemy Attack, Whether by Supersonic Airplane or Modern Sub, *USS Gyatt* Is Navy's First Guided Missile Destroyer. It Is Equipped With Stabilizing Fins.



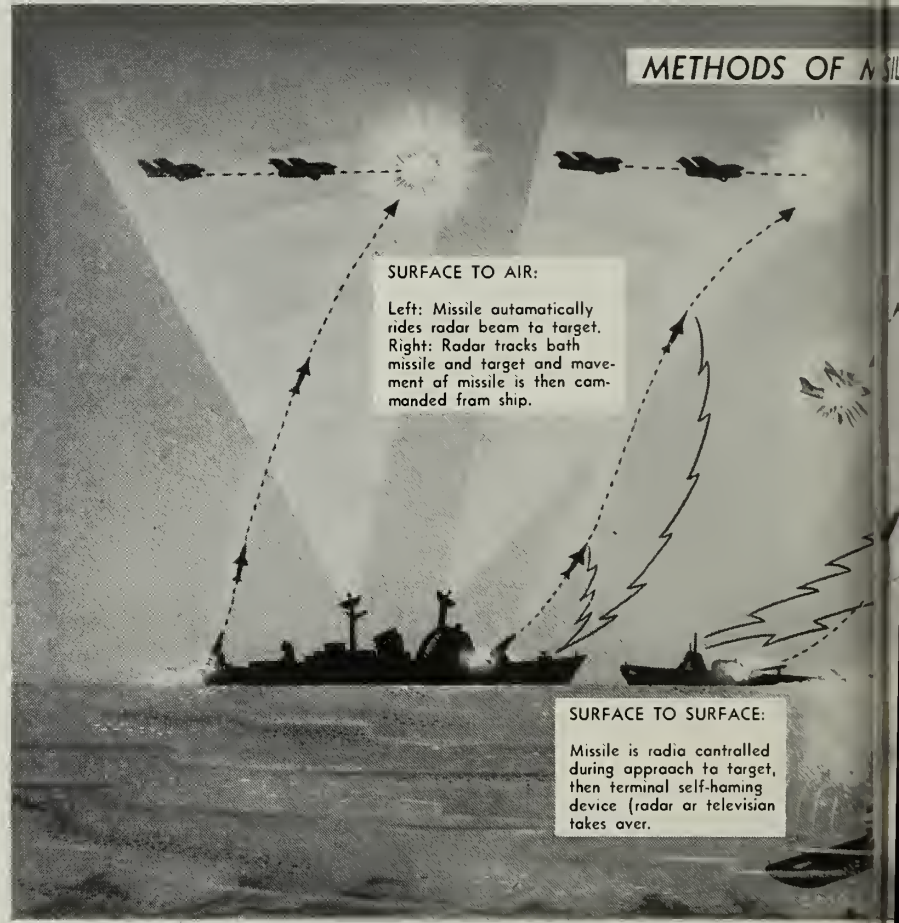
CUTAWAY OF MISSILE POWERE

The Easily-Installed Turbo-Jet *Regulus* Is a Huge Surface-to-Surface Guided Missile.



Sparrow Missile Is an Air-to-Air Weapon That Is a Powerful Deterrent Against Planes.

Petrel, Designed for Use Against Enemy Ships, Is Equipped With a Self-Homing Device.



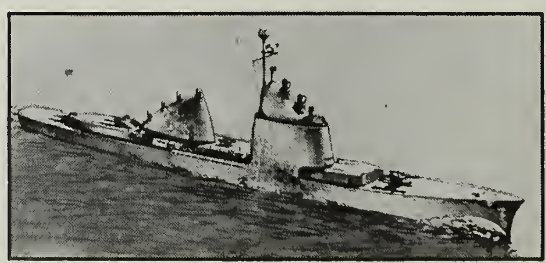
METHODS OF

SURFACE TO AIR:

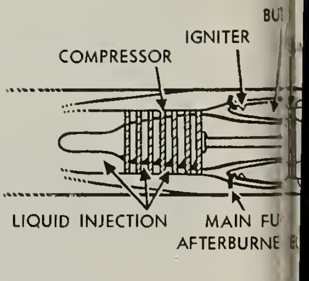
Left: Missile automatically rides radar beam to target. Right: Radar tracks both missile and target and movement of missile is then commanded from ship.

SURFACE TO SURFACE:

Missile is radio controlled during approach to target, then terminal self-homing device (radar or television takes over.



Artist's Conception of the Proposed Nuclear-Powered, Guided Missile Cruiser Designed to Be Effective Against Any Target.



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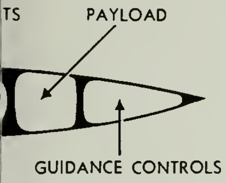
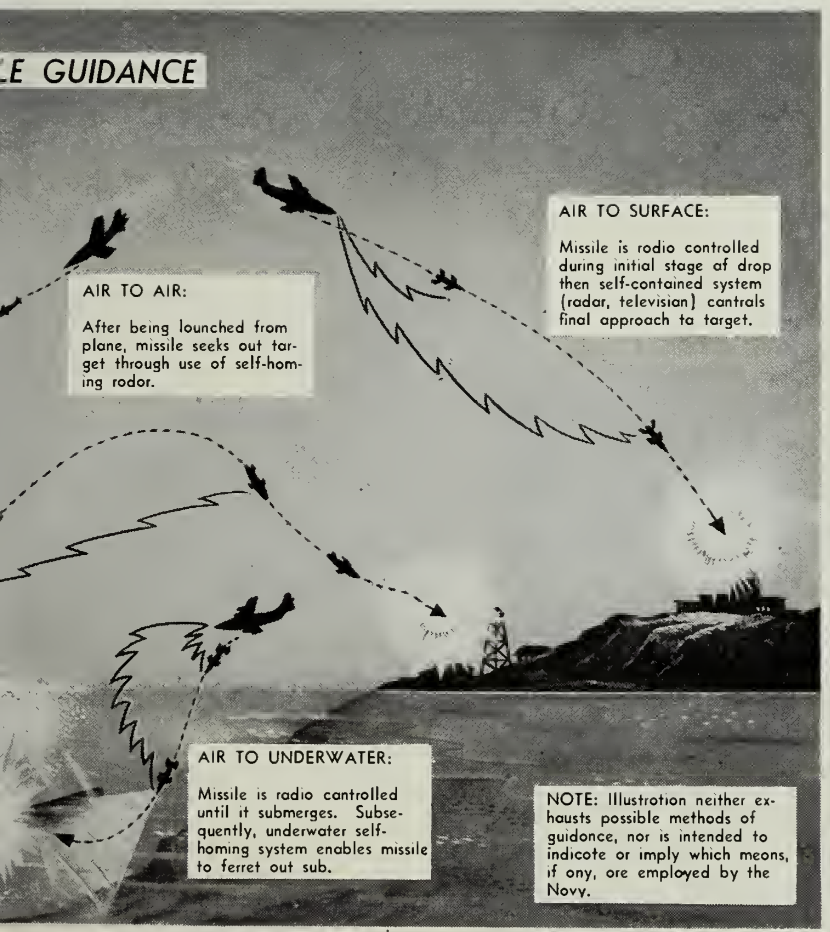


OLID FUEL ROCKET MOTOR.

The Heavy Cruiser *USS Boston* Is the First Navy Warship to Carry the Guided Missile Designation of CAG. She Helped to Introduce a New Concept in Navy Weapons.



LE GUIDANCE

AIR TO SURFACE:

Missile is radio controlled during initial stage of drop then self-contained system (radar, television) controls final approach to target.

AIR TO AIR:

After being launched from plane, missile seeks out target through use of self-homing radar.

AIR TO UNDERWATER:

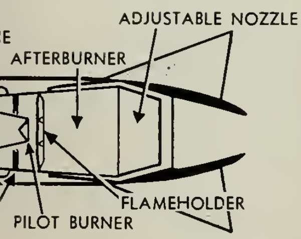
Missile is radio controlled until it submerges. Subsequently, underwater self-homing system enables missile to ferret out sub.

NOTE: Illustration neither exhausts possible methods of guidance, nor is intended to indicate or imply which means, if any, are employed by the Navy.

Navy *Talos* Is a Supersonic Surface-to-Air Missile That Is More Effective Than Terrier.

Sidewinder Is a Simple, Inexpensive Yet Highly Effective Air-to-Air Missile.

Slim, Needle-Nosed *Terrier* Is a Supersonic Guided Missile Used Against Aircraft.



BY TURBO JET ENGINE
(RAM JET).

The Guided Missile Sub Is an Important Phase of the Missile Program. *USS Tunny* (SSG 282) Carries Long Range *Regulus* I.

MISSILES a la MUGU

The outcome of any future engagement may very well depend upon the operation of one of thousands of minute parts in the weapon of the future—the guided missile. Pt. Mugu, Naval Air Missile Test Center, makes sure that it will work right the first time.

TRADATION HAS IT THAT, some 415 years ago a sea-weary Spaniard, Juan Cabrillo by name, made a landfall in a charming lagoon on the California coast about 55 miles north of present day Los Angeles. As almost every later historical reference explains, the current residents, the Chumash Indians promptly named the site "Mugu" (Place of Landing).

The lagoon is gone today and so is Cabrillo and his Indians. Were Cabrillo to succeed in passing the Pt. Mugu security guard he would find, instead of his half-naked savages living in mud huts, roving the mountains and combing the beaches for food, a test center for one of the most efficient and deadly weapons man has yet devised—the guided missile.

Until some 10 years ago, Pt. Mugu was still a swampy stretch of tideland. Today, Cabrillo's quiet beach is seared, day after day, by great blasts of flame and smoke as missiles streak seaward from Pt. Mugu's launching pads. As one of the Navy's guided missile test centers, comparable to the USAF Missile Test Center at Cocoa, Fla., and the Army's White Sands Proving Ground in New Mexico, Mugu has the mission of testing and evaluating guided missiles and their components.

The test center was originally planned during World War II, when the Navy realized that the weapons then under development would require extensive areas of land and water for proving grounds. After considerable exploration of various sites throughout the country, the *Naval Air Missile Test Center* (NAMTC) was established here in October 1946.

HIGH TEST — Navy surface-to-surface guided missile roars off its launching platform on a test flight using JATO rocket bottles to speed its getaway.

In the years following the establishment of NAMTC, the area has grown from a few huts scattered on the beach to a modern city covering more than a thousand acres. Pt. Mugu itself covers some 4234 acres.

During the 10 years since NAMTC was officially established, the facility has conducted thousands of experiments and tests on guided missiles and pilotless aircraft and, in addition, has developed a well organized test center for some of the most advanced missiles in the nation's defense arsenal. Now a $55,000,000 establishment, it consists of clusters of buildings, hangars, and field equipment, and supports the 540-foot, 14,800-ton *Norton Sound* based at nearby Port Hueneme.

Because the testing conducted by the Center requires vast areas over water, some 11,000 square miles of the adjoining Pacific Ocean have become a part of the facility.

During the course of this development, NAMTC acquired 14,000 acres of land on San Nicolas Island, 60 miles southwest of the Center. The offshore station on this island has its own airstrip and technical facilities. Other smaller parcels of land—all contributing to the testing operations—have become a part of the facility. These include 40 acres on Laguna Peak, 57 acres on Santa Cruz Island, and five acres on Santa Rosa Island.

Several of these islands are equipped with radar, optical and photographic gear so that a continuous record may be obtained of a missile's course once it has been launched. The island tracking facilities are also used by USS *Norton Sound* (AVM 1) and submarines such as *Tunny* (SSG 282).

At Point Mugu, the Navy tests guided missiles such as *Regulus*, a missile that is fired from a launching site on the ground or aboard a ship or submarine, and intended to hit another surface target; *Terrier*, a surface-to-air missile, and *Sparrow*, an air-to-air guided missile.

Facilities for missile testing include the main site at Point Mugu,

CAMERAS AT San Nicolas record *Regulus* flight. *Below:* Camera photographing it from air is removed from pod.

with launching pads and control building and an airstrip, and radar systems that operate to track the flight of a missile. A system of theodolites (large telescopes with cameras) also goes into operation to take photographs of the missile's progress. Other photographs are taken by airborne cameras. Facilities also are furnished by the Navy so that designs of civilian firms may be tested. At present, 18 civilian contractors have hangar space beside the Point Mugu naval air station field.

The actual launching of a missile is no casual affair. Thousands of man-hours of labor go into the preparation long before the moment of firing. Hundreds of men have to be alerted. Airplanes are sent out to make sure no ships or other surface craft are in the sea test range area which might be in danger of being hit. The people who actually do the firing, the men who take down the data that is collected, all have to be ready.

In the case of *Regulus*, the missile rests on its cart on a rail launcher. Experts make last-minute control checks. The jet engine is started. Then with the jet engine roaring, the rocket assist takeoff (JATO) goes into action.

Within a few seconds the bottle is burned out and is ejected automatically, leaving the missile in the air dependent only on its engine and ground electronic controls for successful flight.

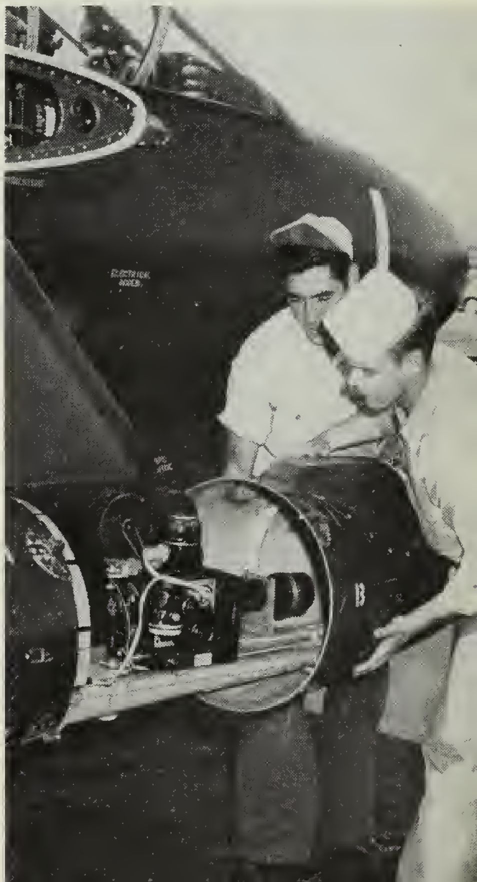
The men who launched the missile into the air have been operating a control board from inside a concrete revetment. They are able to watch the launching from a safe place by means of television. (A specially built television camera stands a few feet from the missile at the takeoff, and relays a full visual picture of what is happening.) Special telemetering equipment has been designed so that every step of each brief missile flight can be recorded and interpreted.

The need for this detailed knowledge of how each control works is based on two things. The Navy wants to eliminate all guesswork. Secondly, a test missile may cost anywhere from $25,000 to $250,000. Mistakes can be expensive in time and money.

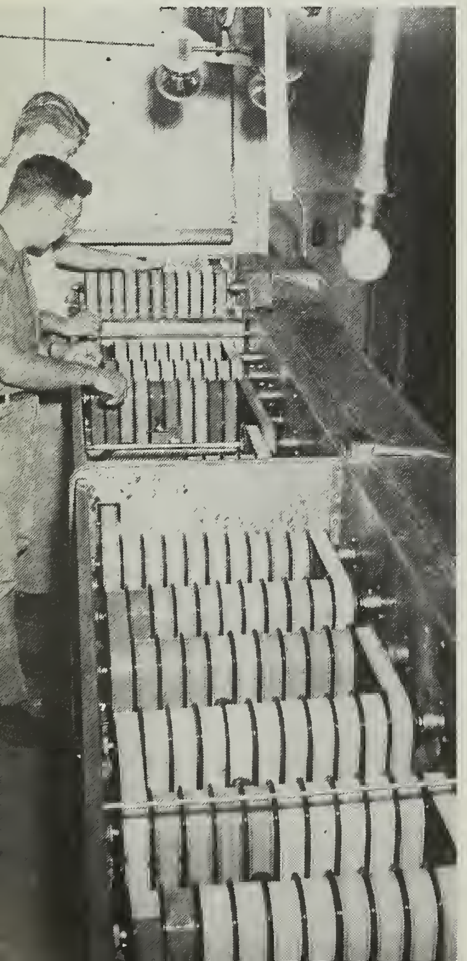
Some missiles are designed, in their test and drone versions, to be recoverable. After they are launched they generally can be guided to a safe landing after completion of their missions.

The test and evaluation of a new type of missile can take many months.

The test center provides the contractor with facilities for launching and testing missiles. The contractor is allowed to make five or 10 test shots. After he has completed these firings, the Navy may let a limited contract to see if he can produce missiles in larger volume and turn out a standardized product. The next phase is to evalute these missiles, which are machine-made, as contrasted to the prototype, which is largely handmade. If they are satisfactory, the Navy may then award a contract for volume production of the missiles.



MUGU 'CREW' work on missile power plant in engine test pit. *Below:* Film shot during missile tests is developed.



Responsibility for the test and evaluation of guided missiles and their components is that of NAMTC's *Test and Evaluation facility*, which is composed of five technical departments. All are directly involved in, and responsible for, the testing activities of the center.

Actual flight testing of guided missiles and pilotless target aircraft is conducted by one or another of the three missile divisions of the *Missile Test Department.*

A typical flight test program usually consists of an evaluation of the missile's remote control equipment, peformance characteristics, flotation capabilities and over-all suitability for Navy use.

A group of civilian engineering personnel is assigned to the *Missile Division* to assist the Navy in this evaluation.

NAMTC's nerve center, in so far as missile operations are concerned, is the *Flight Test Control Area.* Here can be found the instruments used for the final checkout of the missile on the launching platform; firing sequence timers; instruments that record the data pouring in from tracking stations; computers and analyzers used in reducing the mass of data down to the exact performance characteristic desired; and special destructor controls to blow the missile to pieces should it edge outside the limits of the range.

In a specially designed room at Point Mugu, a huge $3,000,000 electronic marvel that can perform approximately six million mathematical operations in five minutes running time is used by NAMTC personnel to work out equations and problems that would take an average mathematician at least four years to complete.

The device checks itself 10 times for accuracy before producing an answer.

Additional Navy facilities have joined the Point Mugu official community. In September 1948, the Naval Air Facility was expanded and in the following years established as the Naval Air Station, Point Mugu.

The mission of the Naval Air Station is to assist and support crews in the testing of missiles and certain types of aircraft.

Other military activities in the area also contribute their services. The Naval Construction Battalion Center, home of the Seabees, is at Port Hueneme, seven miles up the coast where ships and small craft of various kinds are based.

The Navy's extensive and well organized facilities at NAMTC not only serve and advance the work of military groups but they also aid the work of a number of contractors who are involved with military problems.

In addition to the industrial contractors at NAMTC, there are groups such as the Engineering Center of the University of Southern California. The 55 people of this unit work in the Aerodynamic Test Division. The supersonic wind tunnel at NAMTC was designed by the engineering unit from USC. Other missile-connected work contributes to the advancement of young professional people who comprise the group.

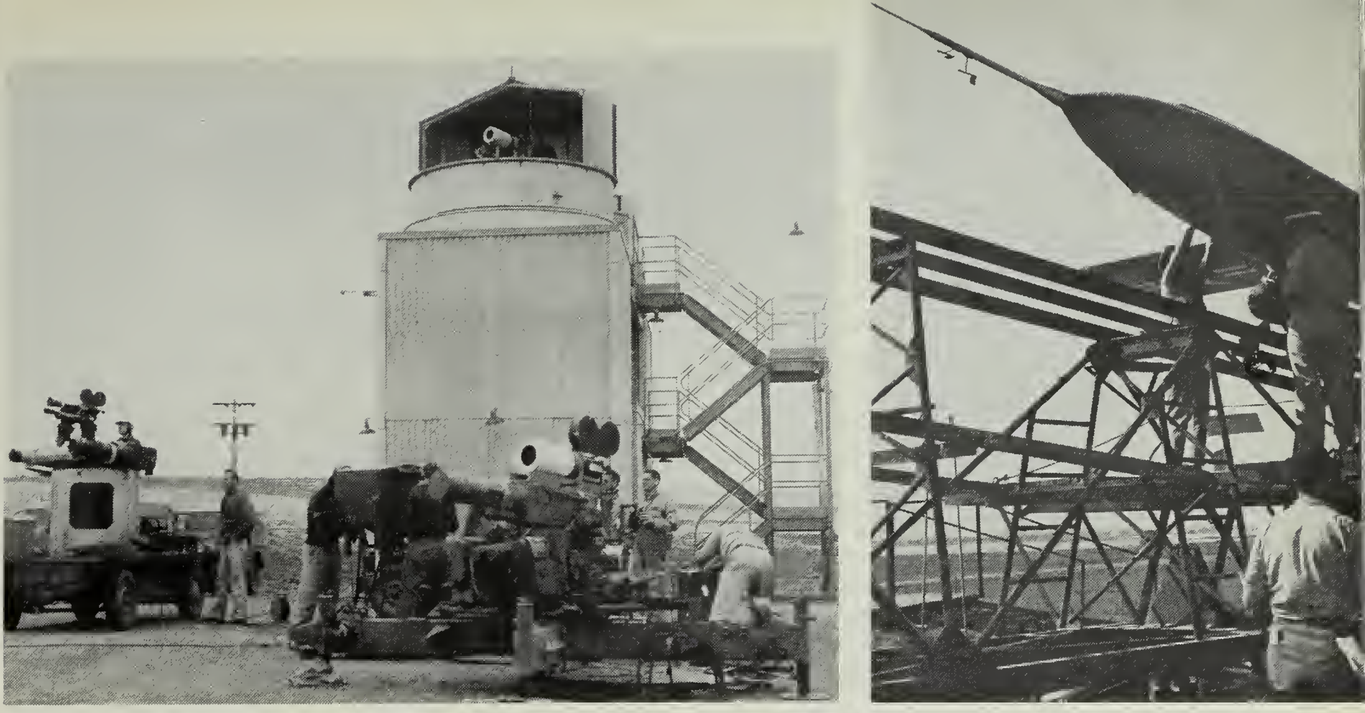
Reserve officer training goes forward at NAMTC as it does in many another naval facility or organization. A unique Reserve training unit, known as BARTU 777 of the Bureau of Aeronautics, trains on a regular schedule.

There are more than 30 members in the unit, and combined they represent an approximate aggregate of 300 years in formal engineering and technical education as well as 400 years of Reserve duty in naval aviation.

ONE OF THE MORE UNUSUAL features of Pt. Mugu—from the viewpoint of its history, the job it performs, and type of duty for Navymen—is windswept and barren San Nicolas Island.

Bucking the waves and wind beyond the Santa Barbara Channel about 60 miles off the Pt. Mugu coast, this island and its larger neighbor, Santa Cruz, are important links in the Naval Air Missile Test Center's range instrumentation chain. In fact, the presence of the islands greatly influenced the selection of Point Mugu as a possible site for the test center.

San Nicolas, nine miles long and averaging three miles wide, is occupied solely by the Navy. Years ago remnants of the tribe of Chumash Indians eked out an existence there, but the last few members of the tribe were removed to the mainland in 1835. From that year until the NAMTC was established in 1946 the island was visited only by fishermen, sealers, sheep herders and a



TURRET CAMERAS follow path of test missile, recording its performance. *Right:* Missile is readied for its flight.

few scientists looking for Indian artifacts.

Today the island is laced with a maze of electronic networks. The roar of aircraft competes with the howling of the wind and the inhabitants spend their time recording the antics of guided missiles or supporting the recorders.

Navymen are assigned to San Nick for three to six months, but many of them find that they like the place and request extensions which are usually granted. Since activities on the island are part of the NAMTC mainland operations and the island itself is part of Ventura County, (since 1872), Navymen receive no extra pay for sea duty.

In regard to facilities, San Nick appears much as the main Center did a few years ago. Most of the buildings are temporary, but a constant maintenance program, carried on in the face of almost continually adverse weather conditions, keeps them relatively shipshape. A few patches of lawn have been attempted, but with more hope than success.

During the past few years a number of permanent, modern structures have been erected.

Most of these are technical facilities, but a new concrete barracks has recently been completed and an impressive galley and messhall which features much glass and a lusty, seldom silent radio with a mania for hill billy music has been in operation for several years.

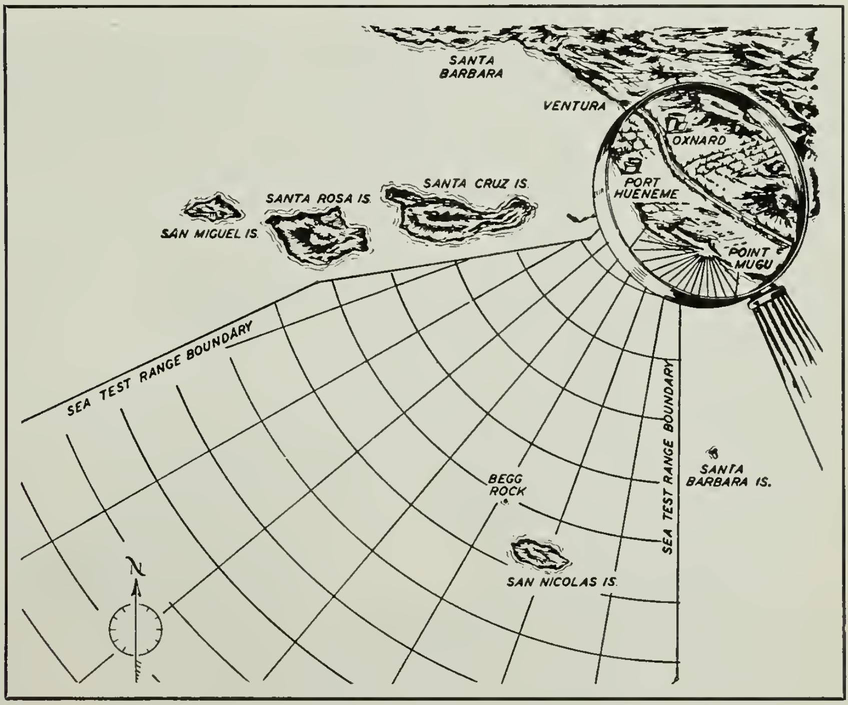
Keeping the men on this outpost supplied with the essentials of life and with equipment with which to work is the primary job of the Island Facilities Department.

The bulk of the island's needs is supplied by boat, primarily LSUs, which must be beached for unloading.

Rough weather often makes the beaching operation unsafe and delays the arrival of materials, sometimes for several days.

In spite of the sometimes primitive living conditions and frequent bad weather, morale on the island is unusually high. Those who don't take to the isolation or lack of privacy usually don't stay long, and as a result the "islanders" who remain are as cheerful and easy-going a group as can be found in the Navy.

CHART shows Point Mugu and Sea Test Range for missiles and missileers.



ROCKETING AHEAD—Artist's conception shows tomorrow's rockets in action.

A Rocket Is a Missile Without

WHAT is a rocket?

According to the glossary of guided missile terms used by the Department of Defense, it can be either "a *thrust-producing system* or a *complete missile which derives its thrust from ejection of hot gases* generated from material carried in the system, not requiring intake of air or water."

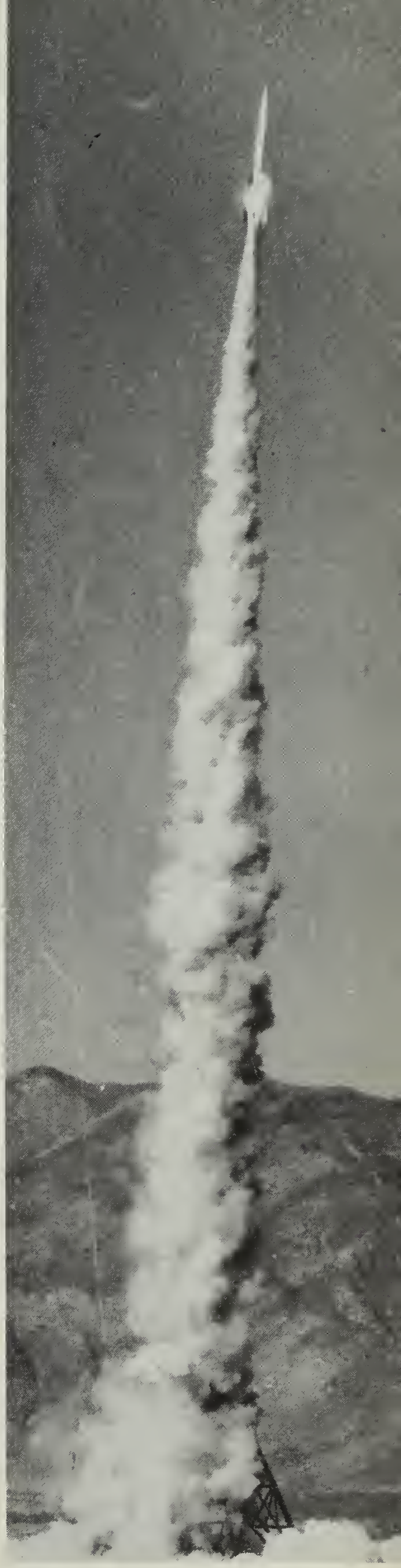
Actually, though, when a missileman talks about "rockets and guided missiles," he means quite a bit more than that. To him, a "rocket" has no more means of guidance—once it is launched—than a bullet has once it leaves the barrel of a rifle. On the other hand, a guided missile (even though it may be rocket-propelled) is "steered" in flight by self-contained devices or a remote control setup. Thus, when a "rocket" is subject to guidance it is no longer a rocket, but a guided missile, which the DOD glossary (See page 3) defines as:

"An unmanned vehicle moving above the earth's surface, whose trajectory or flight path is capable of being altered by a mechanism within the vehicle."

Man has known about rockets for many centuries, and it was way back in the year 1232 A. D., when the Chinese first used them in combat (See page 58). Yet, for more than 700 years the vast potential of the rocket, both as a weapon and as a means of propulsion, was largely ignored.

The first real exploitation of the rocket as a weapon didn't come about until the first half of the 19th century, when the British, after encountering them in India, used them with considerable success in the Napoleonic Wars and the War of 1812. At the Battle of Bladensburg (24 Aug 1814) rockets helped defeat the inexperienced American troops defending Washington, D. C., and the following month British "rocket ships" were employed in the bombardment of Fort McHenry. There, a hidden battery sank one of the ships with all hands and the

'RED GLARE' of rocket's fire from Navy LSMR shore bombardment on Korean coast creates pattern of destruction.



ROCKET REVIVAL in WW II brought air-to-ground rockets like these. *Right:* High-flying Navy research rocket, *Aerobee,* takes off to explore the sky.

Brains

other rocket craft were forced to withdraw without accomplishing their missions. However, their fire made such an impression on Francis Scott Key that "the rocket's red glare, the bombs bursting in air" are now permanently recorded in our National Anthem.

British success with rockets led the armies of other nations to follow suit, making the rocket a popular weapon for several decades. Then about 1850, with the adoption of rifled artillery, rockets went "out of style." By 1900 they were considered obsolete almost everywhere, and as late as 1942, the *Encyclopaedia Britannica* referred to the importance of rockets in modern warfare with these words:

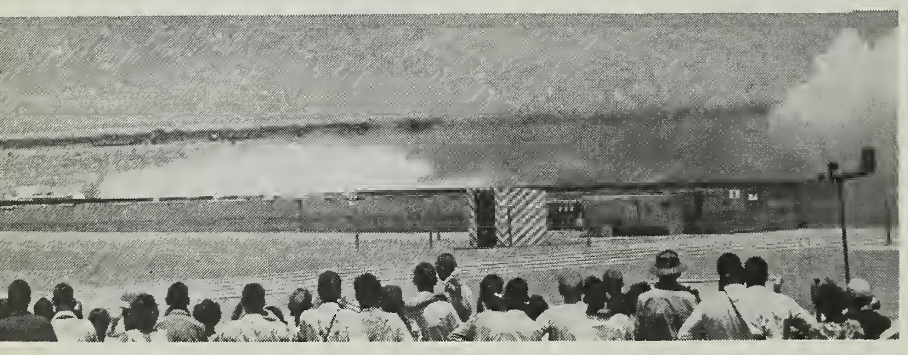
"The idea of a missile propelled on the rocket principle, however, will not down and is revived from time to time for discussion by contributors to military journals."

Evidently the "contributors to military journals" knew what they were talking about, for in World War II the rocket came back into its own with a bang (or at least a swoosh). The lightweight bazooka and its rocket projectile enabled infantrymen to knock out tanks. The U. S. Navy used rocket-launching landing craft (LSMRs) in the invasions of North Africa, Sicily, Italy, Normandy, southern France, Cape Gloucester, Kwajalein, Eniwetok, Saipan, Guam, the Palaus, the Philippines, Borneo and Okinawa.

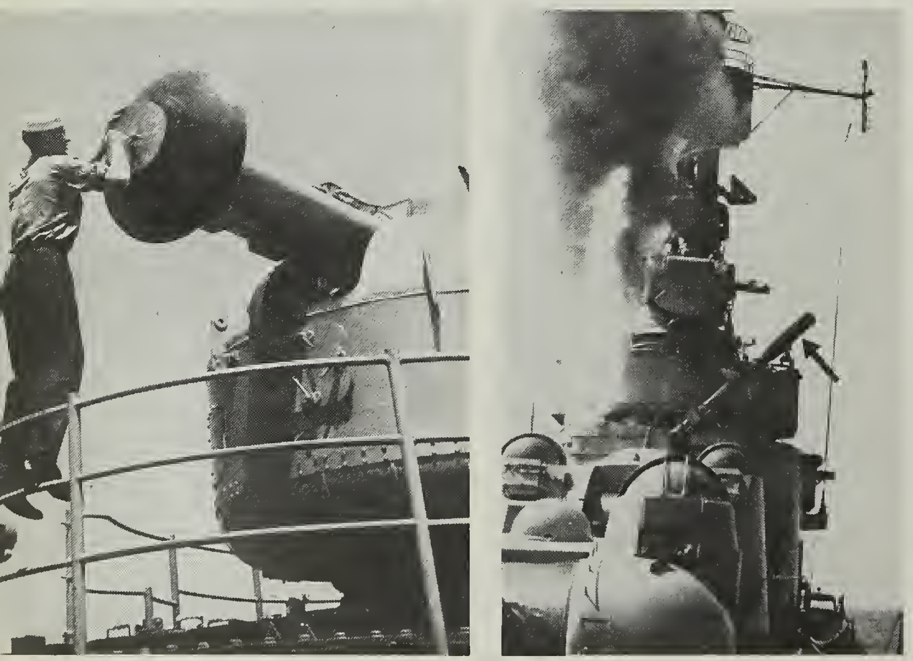
In addition, since the rocket offered a maximum of firepower with a minimum of added weight—and no recoil—it was soon adopted for aerial armament. The first air-launched U. S. rockets were little more than adaptations of the bazooka, but by war's end Navy planes were blasting the enemy with *Tiny Tim,* an 11.75-inch rocket which weighed 1,288 pounds and had a 500-pound, semi-armorpiercing bomb for a warhead. Another important use of rockets in aviation was JATO (Jet Assisted Take-Off), which enabled heavily-loaded planes

LATEST ROCKET SHIP, the inshore fire support ship *USS Carronade* (IFS 1) looks sawed off but she is larger and has greater fire power than the LSMR.

ROCKET MEN on LSMR launch their weapons against harbor installations during Korean conflict. *Below:* Rocket-powered sled used in aviation research.



ALL WET—Anti-sub rocket, *Weapon Able,* is uncovered and fired on board *USS Wilkinson* (DL 5). Arrow (right) points to rocket leaving its launcher.



to take off from runways much shorter than those they ordinarily required.

Ironically, though, the most devastating rocket-powered weapon of the war was one used against England, the nation which introduced rockets to Europe. This was Germany's V-2.

After the war the new field called "rocketry" more or less branched out into three different (but often overlapping) phases of study—rocket engines for guided missiles and aircraft, high-altitude research with rockets and the development of improved rocket weapons.

- In rocket engines for guided missiles and aircraft it has produced the motive power for three of our five operational guided missiles—*Sparrow, Terrier* and *Sidewinder.*
- In high-altitude research rockets it has launched data-gathering projectiles from ground installations, ships, planes and balloons to help unlock the secrets of the upper atmosphere and outer space. In this work the Navy has used the V-2, the *Aerobee, Aerobee-Hi, Deacon, Asp, Loki, Cajun, Viking* and various combination rockets such as *Nike-Deacon* and *Nike-Cajun.* The *Aerobee-Hi* has reached an altitude of 164 miles, the *Viking* has gone to 158 and Navy-launched V-2s have gone to about 105 miles. Among those being developed are the *Arcon,* a super-performance *Deacon;* and the *Iris,* a solid-propellant version of the *Aerobee* which should reach altitudes up to 200 miles.

In Project Vanguard, the scheduled launching of an earth satellite as part of the International Geophysical Year program, the Navy has been assigned the rocket phase.

- Since guidance and control systems are still expensive and complicated, the rocket without such systems is still an important part of the Navy's armament. Besides the LSMRs which saw action in World War II and Korea we now have the inshore fire support ship (IFS) which is larger and has more firepower than the LSMR. For antisubmarine warfare we have "Weapon Able," and in the air we have *Mighty Mouse,* the first successful air-to-air rocket.

That, in brief, is the story of the rocket up to now. Oddly enough, despite the rocket's 700-year history, the most important part of that story is yet to be written. —Jerry Wolff

VIKING ROCKET is towed to launching site at White Sands Proving ground.

Navy's Viking Is a Record Breaker

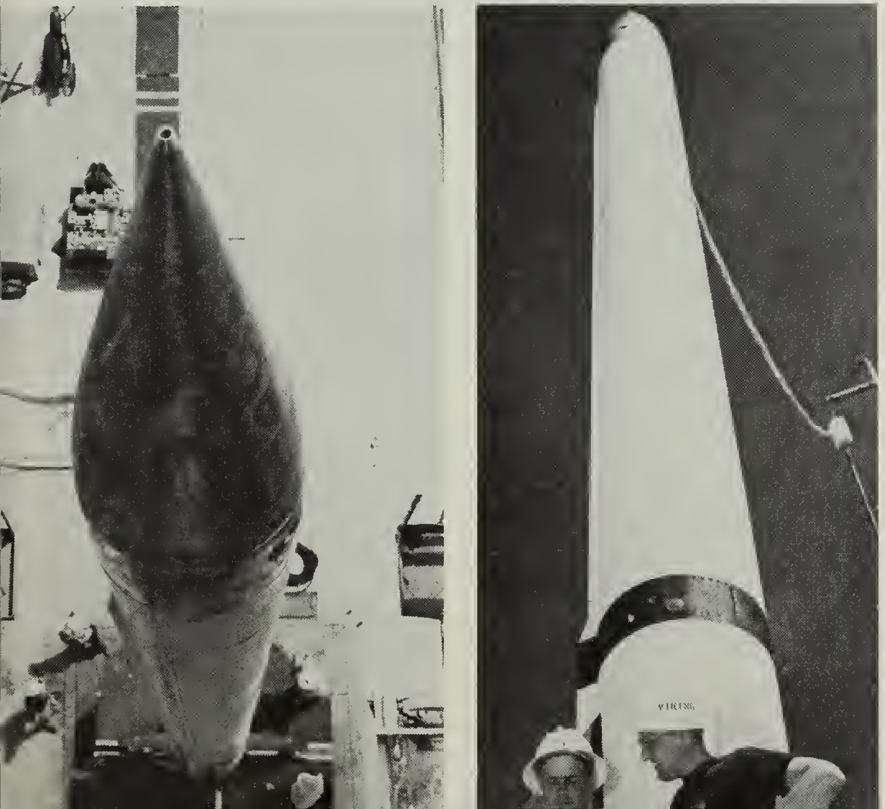
A GIANT AMONG ROCKETS is Navy's high flying *Viking*. Blasting skyward from White Sands Proving Ground, it has soared as high as 158 miles carrying with it cameras and scientific instruments to record valuable information on the upper atatmosphere. It has accomplished a long record in its brief history.

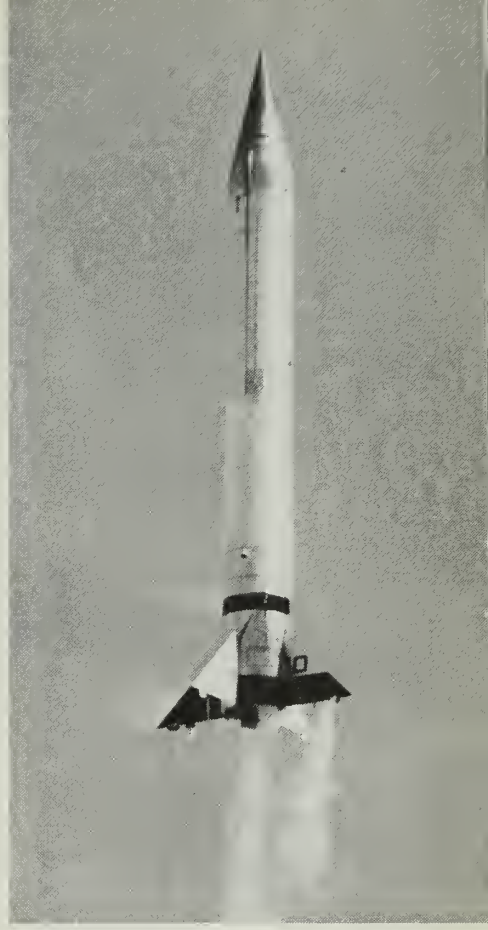
The *Viking* rocket came into being in 1946 when it was decided that rather than build a copy of the captured German V-2 it would be better to produce an entirely new vehicle designed expressly for high-altitude research.

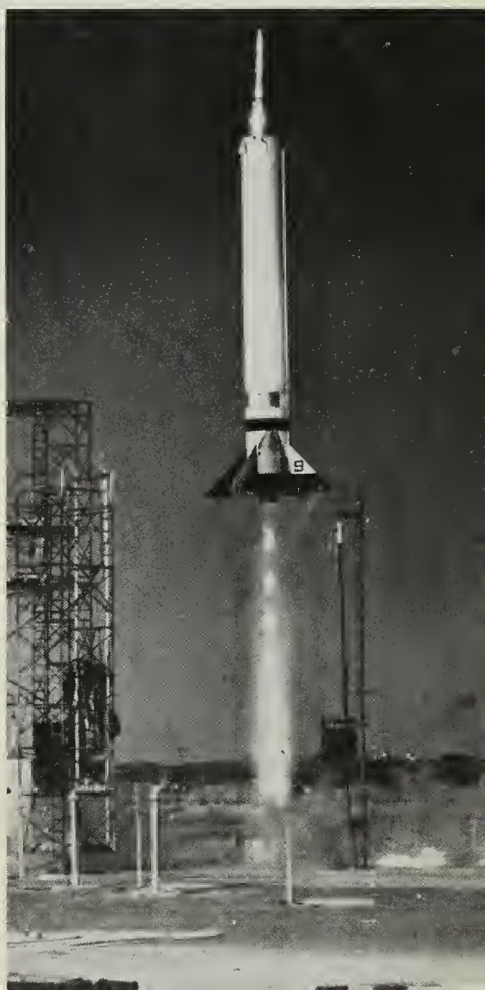
Although the first *Viking* only went up to little over 51 miles because of a premature motor cut-off, subsequent firings attained a new altitude record for single staged rockets, previously held by its German cousin.

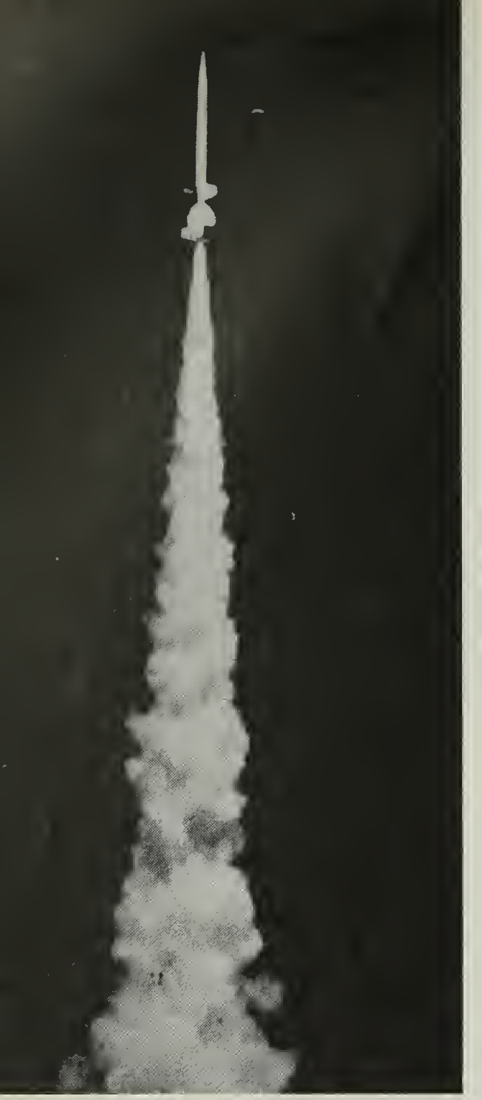
A modified *Viking* will play an important part in Project *Vanguard* as the first stage of the three-stage rocket being designed to launch the earth satellite.

ON THE UP AND UP — Navy's high-flying rocket is readied in gantry. *Far Right: Viking* blasts away from earth reaching toward outer space.









Birth of the Earth

Closely associated with the rocket and guided missile programs discussed on the preceding pages is the story of the man-made satellite. Here is the story and the Navy's role in it:

SOME TIME DURING the 18-month period beginning next July 1, a huge, three-stage rocket will take off from a point in the United States and head for "up." One of the most ambitious undertakings yet to be conceived by man, *Project Vanguard* will simply throw a small metal globe some 200 or 300 miles into space. This, and similar later efforts, will be the culmination of many contributions made by the U.S. armed forces and scientific institutions to the International Geophysical Year. (For more on IGY, see May 1956 issue of ALL HANDS, pp. 2-6.)

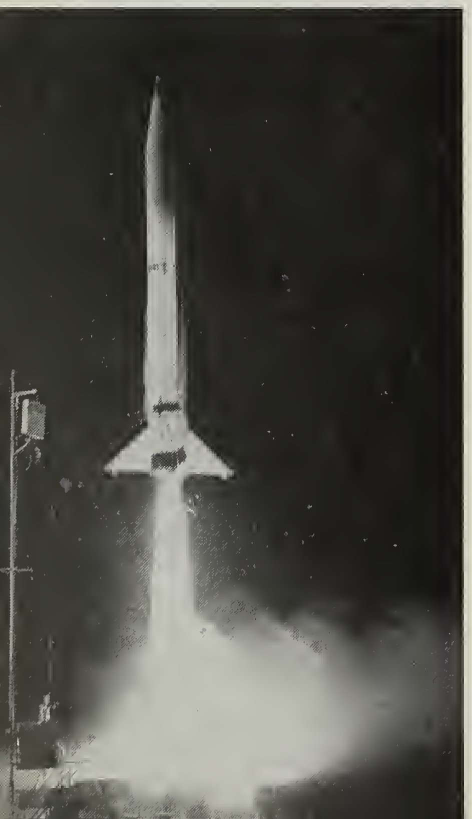
Vanguard is the name assigned to the Department of Defense portion of the earth satellite program. The program is conducted on a three-service basis with Navy management through the Chief of Naval Research. Responsibility for the technical program rests with the Naval Research Laboratory. This includes the three-stage launching vehicle, the launching, the initial radio tracking of the earth satellite and the operation of some of the tracking stations.

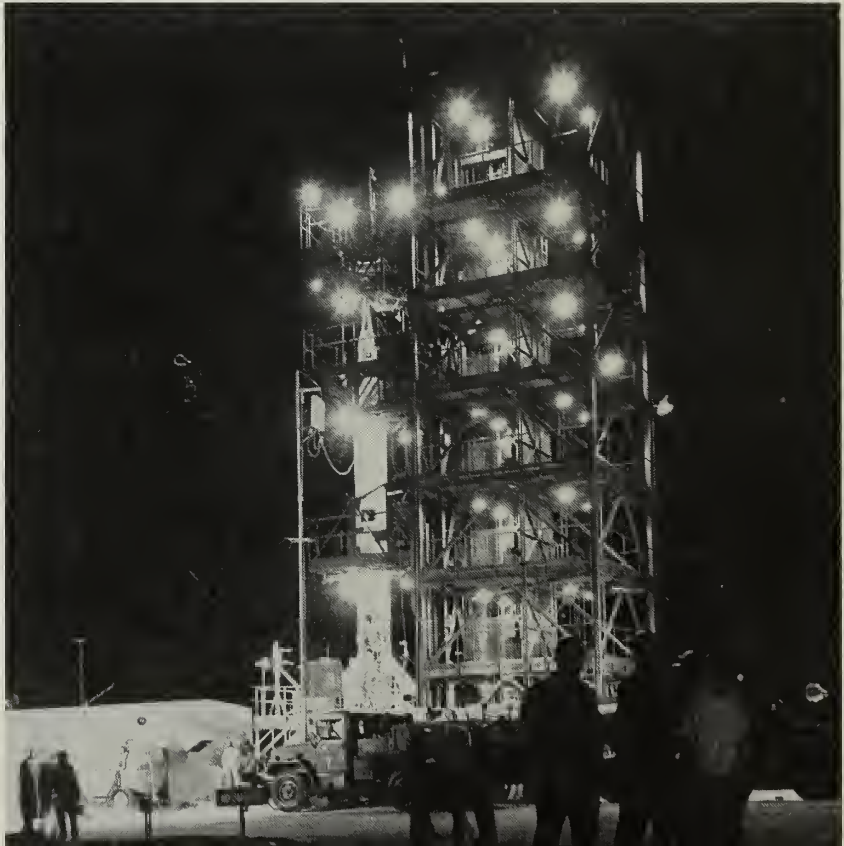
It is anticipated that when the globe reaches its destined height, it will be traveling about the earth at some 18,000 miles per hour, fast enough so that it will make a revolution about the earth approximately every 90 minutes. No one knows exactly how long it will stay in its orbit, nor the precise shape and altitude of the orbit, since all this will be determined by the speed, altitude and orientation of the rocket when the satellite is finally separated from it. However, so long as it maintains its orbit around the earth, it will be, literally, a miniature satellite broadcasting information about itself and its environment to observers back on earth.

What will it do? What's the point of the whole thing?

The main point is to find out what's up there besides a bunch of widely spaced nothing. Inside the shell of the satellite will be a tiny

HEAVENS ABOVE — *Viking,* shown below at Patterson AFB *Vanguard* test, and *Aerobee* (left) will take satellite up through the first and second stages.





Satellite

'MOON SHINE' — Full scale model of earth satellite made by Naval Research Laboratory has shiny thin skin made of two hemispheres of polished aluminum.

"Minitrack" and telemetering transmitter, batteries, and as many scientific instruments as can be efficiently included. These will record the temperature of the satellite as it travels through space, measure the intensity of the sun's ultra-violet rays, count the number and the erosion effects of the micro-meteors striking the satellite, and reveal other secrets of the region just above the atmosphere. These data will be telemetered to a series of special high-powered receiving stations on earth.

Scientists hope to learn something about certain light waves which cannot be studied on the ground as they do not penetrate the earth's atmosphere. This should tell them more about the sun and solar physics—what makes the sun tick, how it provides energy, the effect of sun-spots in long-range communications, what makes the weather on earth so changeable, and similar problems.

Visual plotting and radio tracking of the satellite will enable man to measure the bulge of the earth at the equator and perhaps learn many other facts about the size and shape of the earth. It will permit measurements of the uniformity of the earth's crust, and provide much more accurate data on distances, permitting more accurate mapping.

The Buck Rogers contingent also hopes to learn a lot about meteors —among other things, whether or not it would be safe to launch large manned satellites farther out into space.

After the first satellite is successfully launched, later ones may carry other types of instruments for additional data. It is hoped to learn more about cosmic rays, the earth's magnetic field, and other data about astrophysics—the physics of the universe.

When it takes off, the 21.5-pound ball, which will be approximately 20 inches in diameter, will be carried by an 11-ton 72-foot-long, finless three-stage launching rocket. The first stage of the rocket, which is about two-thirds of the entire assembly, will push up to about 35 miles in something over two minutes.

This first stage will be a modified and improved version of the earlier *Viking* rocket. It will have no fins, since the rocket's direction will be adequately controlled by tilting its motor. The motor is mounted in a gimbal bearing which permits varying the direction of thrust by several degrees from the center line of the rocket.

Three gyroscopes will be the heart of the reference system that provides steering "instructions" to the autopilot.

This motor will produce 27,000 pounds of thrust, and will operate for about 140 seconds. The propellants will be liquid oxygen and kerosene. They will be forced into the combustion chamber by turbopumps powered by the decomposition of hydrogen peroxide.

The second stage, liquid-propellant motor will be fueled by white fuming nitric acid and unsymmetrical dimethyl-hydrazine. They will be forced into the combustion chamber under pressure. The third stage, which will carry the satellite, will be a solid-propellant rocket motor.

The third stage, carrying the satellite on its nose, must be projected into its final position with great precision, in order to establish an orbit that will not appreciably intercept the earth's atmosphere. The friction of the earth's denser atmosphere would cause the satellite to lose its energy too rapidly and fall prematurely toward earth.

The total flight path will follow, rougly, a vertical ascent for a short period after launching, then a gradual inclination toward the horizontal. The first-stage rocket will burn out and drop off at 30 to 40 miles' altitude when a velocity of 3000 to 4000 miles per hour is reached. The second rocket will burn out at about 140 miles' altitude and about 11,000 mph, and coast under its own momentum to an altitude of about 300 miles. At this altitude the third motor will fire and accelerate the satellite vehicle to its orbital velocity, about 18,000 mph.

Once established in its orbit, the satellite must be tracked. Most scientists agree that optical tracking, through the use of instruments such as the photo-theodolite, will work but that the satellite is difficult to spot unless the observer knows the orbit's predicted position. At best, the satellite will be visible, to optical devices, only during the few

HOW TO MAKE A SATELLITE — NRL machinists work aluminum blank into shape for the satellite's skin.

hours after sunset and before sunrise, assuming that weather conditions permit visibility and that the observer has previous knowledge of when the satellite will pass within optical range.

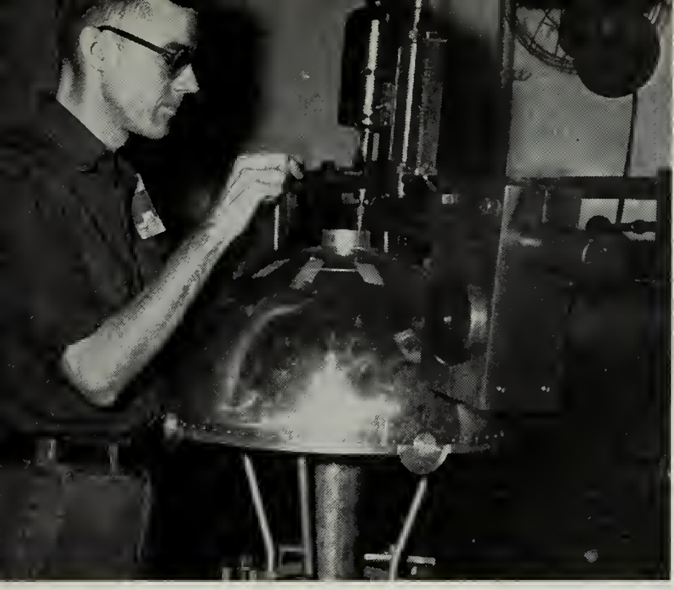
Because of these drawbacks, a more reliable method of tracking has been developed at the Naval Research Laboratory. Known as "Minitrack," this method uses a miniature radio transmitter in the satellite which radiates a continuous signal to sensitive receiving equipment on the ground. This method also aids optical tracking, by furnishing estimated satellite position predictions, but requires a line of observing stations to intercept the satellite on its orbit, in fair weather or foul, any hour of the day or night. The satellite is expected to make one revolution around the earth approximately every 90 minutes.

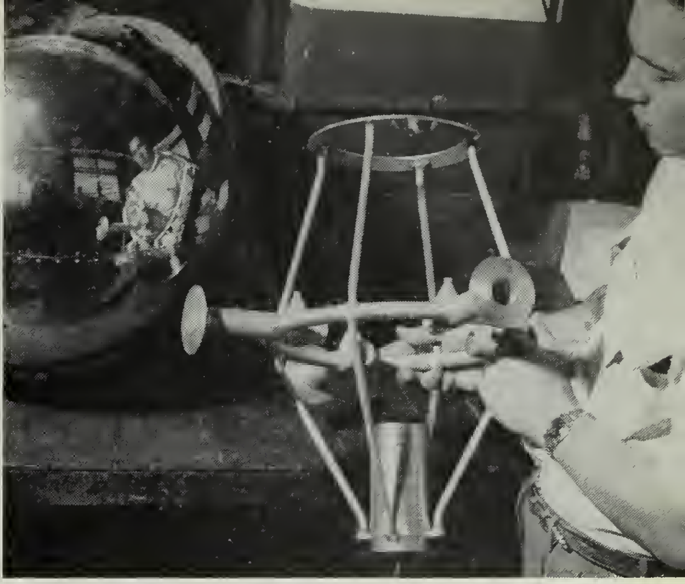
As suggested earlier, *Vanguard* is one of the most ambitious projects ever to be undertaken. It is an attempt to probe the fringe of outer space, so necessary before man himself can hope to attempt the big jump. The effort raises innumerable problems which must be answered before this first satellite can be launched.

The satellite itself must be sufficiently large to permit optical tracking and to carry scientific instruments, and yet be light—every ounce is important. Yet the design must be sufficiently sturdy to protect the scientific devices inside against the high accelerations and vibrations encountered on the ascent, and to survive after release from the third-stage rocket vehicle—to withstand the extremes of temperature in its orbit, as well as to resist the pitting action of micro meteorites—so-called meteor "dust."

The amount and kind of instruments to be included in this first satellite are other areas in which problems must be solved and compromises agreed upon. Subject to

INSIDE STORY — Plastic foam encased electron package is put into gold plated housing and 'lid' is attached.





HOLES ARE DRILLED in finished half of the sphere. *Right:* Supporting inner structure is readied for installing.

weight and space restrictions, enough instruments must be sent aloft to do as much scientific work as is possible. *Vanguard's* job is to put into an orbit an object capable of doing work of importance to as many scientific fields as possible.

The first satellite cannot completely satisfy the men in each field—it cannot do all the things they would like to see done. The *Vanguard* technical program must result in a satellite that will be workable, yet scientifically useful.

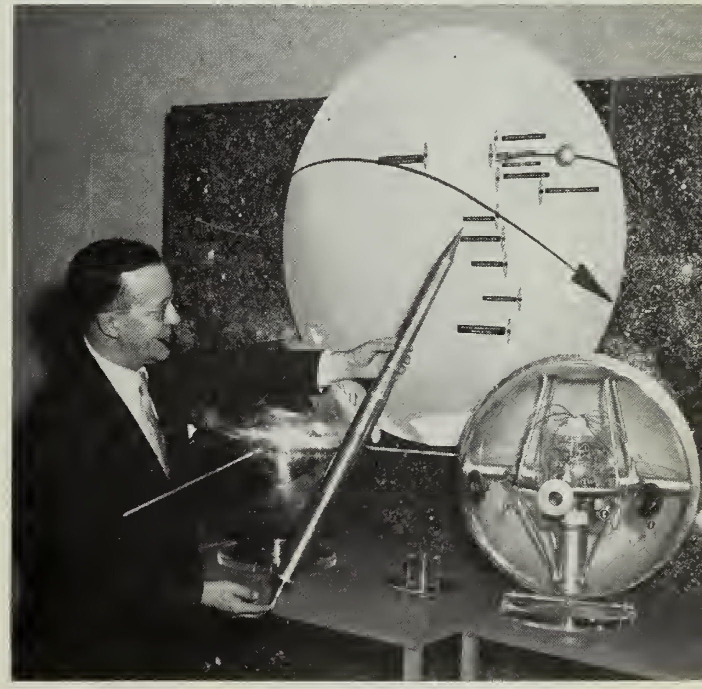
On the technical side, this means sacrifices in terms of accepting a certain minimum size and weight, with resultant engineering problems. On the scientific side, it means sacrifice in terms of the useful payload which the first satellite will carry. A fraction of its weight—perhaps one-fourth—will consist of scientific research instrumentation and its power supply. The remainder will be devoted to structure, a tracking transmitter, power supply, and possibly turn-on equipment.

Several rockets will be built in connection with the program because, to be reasonably certain of successfully putting a satellite into an orbit, we must have more than one shot available in our locker.

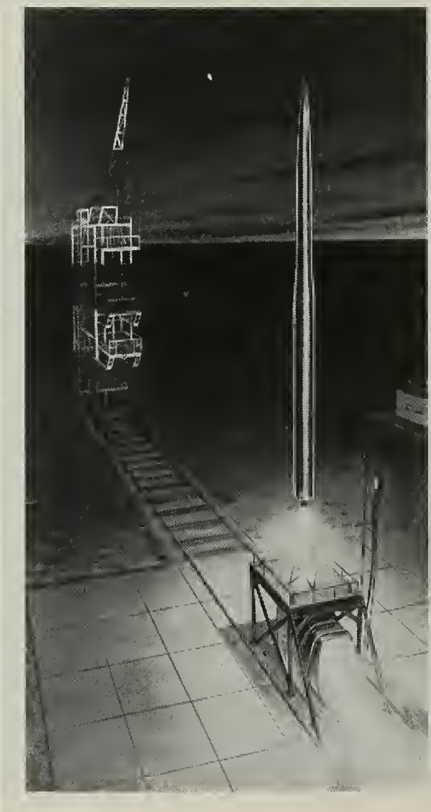
If only one attempt were to be made, the chances of failure would be greatly increased. This is a field that places great demands upon everyone's knowledge and calculations of probable performance. Much money is involved. If all of this money and all of this effort were risked on one shot, everyone concerned would always be faced with the desire to make one more calculation, one more adjustment or one more test flight before firing, in order to be more certain of success. In such circumstances, *Vanguard* might never get off the ground.

To complete the job on time, every step of the program must be marked by bold, confident engineering in which we are prepared to take the

BALANCE, spin is tested by ENS A. Simkovich. *Rt:* Dr. J. P. Hagen, director of *Vanguard,* demonstrates orbit.



NAVAL RESEARCH LABORATORY engineer adjusts tiny info-collecting device. *Below:* *Aerobee*, *Viking* and *Vanguard* rockets. *Rt:* Drawing depicts launching.



consequences of falling short of perfection.

Determination of specifications for the launching rocket and the satellite, and their construction, represent major phases of the technical program for *Project Vanguard*. The project director must be equally concerned, however, with the related programs.

As soon as the project was established, Navy scientists and facilities officers began a series of consultations with their Army and Air Force counterparts to determine the best launching site, the requirement for logistic support and how they will be met by the three services, and how problems of establishing and manning tracking stations will be handled. A launching site has been selected. The satellite will be launched by the Navy from the Air Force Missile Test Center at Patrick Air Force Base, near Cocoa, Fla.

Scientists are now working to determine the primary orbit of the satellite and the specific tracking methods. Both optical and radio tracking will be used. Time, speed and position information from many separate sightings at different tracking stations must be fed rapidly into a central electronic computer, which will determine the orbit on the basis of this information. Data on the orbit must then be broadcast quickly throughout the world to enable scientists of the IGY to pick up the satellite with little difficulty.

(If you are at the right place at the right time, and know where to look, you will be able to see the satellite yourself. For the past several years, scientists have been conducting studies on the visibility of stars at night and during the day. Calculations were made on the conditions under which small earth satellites might be seen. For purposes of this study, the scientists assumed a satellite that was a 21-inch sphere traveling in an equatorial orbit at an altitude of from 200 to 1000 miles. As a result of these studies, "it has been concluded that if one knows exactly where and when to look, a satellite when nearly directly overhead and at 200 miles altitude would first be visible through 7 x 50 binoculars when the sun is 2° below the horizon, and would be visible to the naked eye for solar depression angles greater than 9°. To see such a satellite easily, however, and to be sure of observing it, when the position is

not known exactly, some telescopic magnification, such as 7x50 binoculars would almost be a necessity and observations of the satellite should not be attempted until the sun is 5° below the horizon.")

When the rocket and its satellite payload are ready to launch, and all of the launching facilities and tracking equipment and stations are in readiness, the launch vehicle will fire the satellite up into its orbit.

The satellite's orbit probably will be elliptical, rather than circular. The point of nearest approach (the perigee) will be about 200 to 300 miles from the earth, and apogee—the most distant point in the orbit—will be from 800 to 1500 miles out.

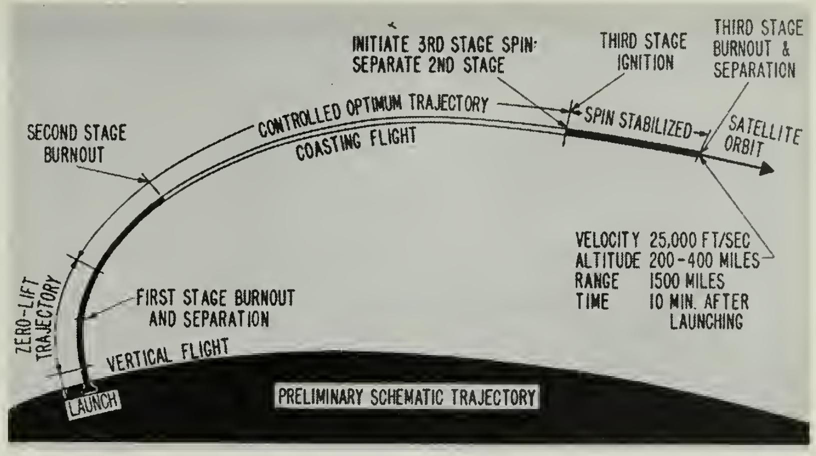
The problem of guidance, to ensure that the satellite is projected horizontally into its orbit, is especially difficult. If the angle of projection is too high or too low, perigee will be too close to the earth and the satellite will dip into the denser portions of the atmosphere and disintegrate before it has made enough revolutions to be of any value. The angle of projection should not deviate by more than a few degrees from the horizontal for a launching altitude of 300 miles.

If it misses by more than this, the perigee altitude will be roughly half of the launching height, which would cause the satellite to dip well into the denser parts of the atmosphere and cut short its life. The guidance system must therefore be designed to ensure an error of no more than a few degrees in the angle of projection into the orbit.

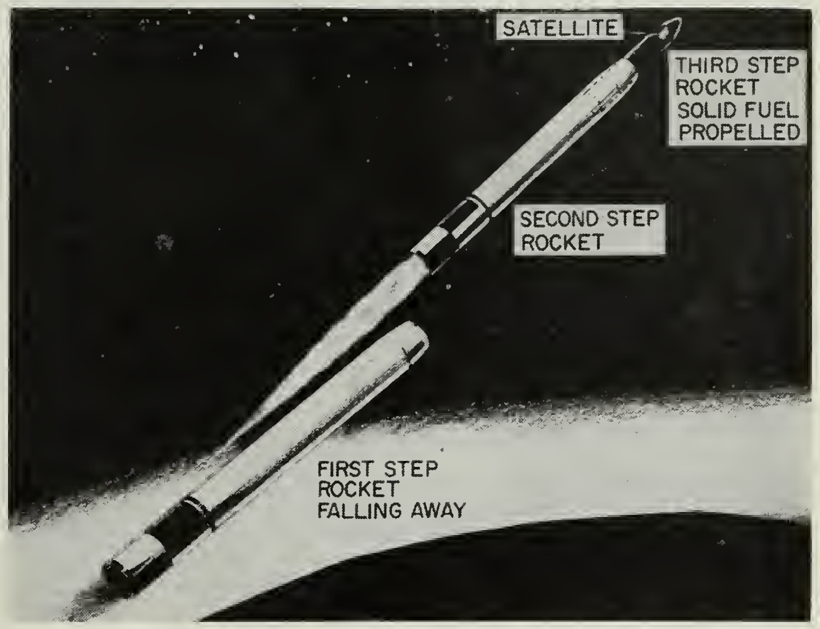
The consequences of missing the planned orbit, which are fairly serious in terms of the satellite's lifetime, would also pose difficult problems of tracking. The satellite will "transit" different areas of the earth on each revolution. If a revolution is completed in 90 minutes, as it is now contemplated, the earth will have completed roughly one-eighteenth of its daily rotation during this time, so that the satellite will appear at a different longitude for the same latitude on its next trip.

Although the portion of the atmosphere through which the orbit will pass is extremely thin (just *how* thin is one of the facts that the satellite may establish), the cumulative effect of the drag of this thin air will be enough to bring the satellite gradually closer to the earth. As the satellite enters the denser atmosphere, it is expected to disintegrate harmlessly in the same manner as a meteorite, because of intense heat and probable mechanical collapse.

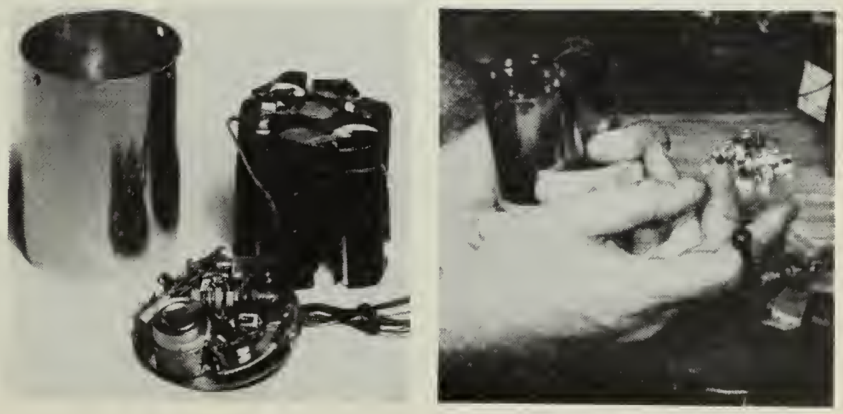
The lifetime may be several days, or weeks, months, or even years, depending upon what is up there and upon the degree of precision attained in the launching.


INITIATE 3RD STAGE SPIN: SEPARATE 2ND STAGE
THIRD STAGE IGNITION
THIRD STAGE BURNOUT & SEPARATION
SECOND STAGE BURNOUT
CONTROLLED OPTIMUM TRAJECTORY
COASTING FLIGHT
SPIN STABILIZED
SATELLITE ORBIT
VELOCITY 25,000 FT/SEC
ALTITUDE 200-400 MILES
RANGE 1500 MILES
TIME 10 MIN. AFTER LAUNCHING
ZERO-LIFT TRAJECTORY
FIRST STAGE BURNOUT AND SEPARATION
VERTICAL FLIGHT
LAUNCH
PRELIMINARY SCHEMATIC TRAJECTORY

UP IN THE AIR — Diagram above shows stages and path of rockets carrying satellite to orbit. *Below:* Drawing shows three-stage launching rocket.


SATELLITE
THIRD STEP ROCKET SOLID FUEL PROPELLED
SECOND STEP ROCKET
FIRST STEP ROCKET FALLING AWAY

MINITRACK TRANSMITTER will send signals from the earth satellite to tracking stations on the ground. Transmitter was designed at Naval Research Lab.



Brief news items about other branches of the armed services.

'OFF IT GOES' — The Air Force's long-range strategic guided missile, SM-62 *Snark*, takes off on a test flight.

★ ★ ★

In thumbing through this special issue of All Hands, you may get the impression we are suggesting that only the Navy is using guided missiles. Not at all. We've emphasized Navy guided missiles because this publication is written primarily for naval personnel. However, make no mistake, the Army and Air Force are equally active.

Here's a brief unclassified rundown on their guided missile arsenal:

★ ★ ★

ARMY

On 16 Apr 1946, the first American-fired V-2 rocket was shot into the air above the New Mexico desert at the Army's White Sands Proving Ground to conduct research in the field of rockets and guided missiles. By February 1949, Army scientists had combined the V-2 rocket and an experimental liquid fuel, high-altitude rocket known as the WAC *Corporal.* This two-stage rocket, nicknamed *Bumper* attained the highest altitude ever reached by any man-made object—250 miles up and traveling at a speed of 5000 miles an hour.

FOR THE BIRDMEN—Supersonic *Falcon* guided missile for USAF interceptor pilots can down maneuvering bombers.

Further developments by the Army include: *Nike*, named after the Greek goddess of victory, which is the Army's first supersonic antiaircraft guided missile designed to intercept and destroy the enemy target regardless of evasive action. *Nike* guided missile installations are now spread throughout the United States as an inner ring of defense for industrial, highly populated and strategic areas. *Nike* is a liquid-fueled supersonic antiaircraft missile about 20 feet long and about one foot in diameter, with two sets of fins for guidance and steering. The missile and booster weigh more than one ton.

Speed, range, altitude and lethality of *Nike* are classified. Fired from an almost vertical position, *Nike* can meet an attack from any direction. There are eight launchers in each *Nike* battery, which is operated by a crew of approximately 100 men. Personnel are trained at the Antiaircraft and Guided Missile School, Fort Bliss, Texas.

The improved *Nike B* is capable of dealing with high performance aircraft.

Corporal, equipped with either an atomic or conventional type warhead, is capable of engaging targets far beyond the ranges of artillery or the new 280mm gun.

The weapon gives the field commander great firepower on the battlefield and enables him to strike selected targets deep in enemy rear areas. *Corporal* follows a ballistic trajectory in its flight to the target. Weather and visibility conditions place no restriction on the use of the weapon. Motive power is supplied by a powerful rocket motor. The missile travels through space at several times the speed of sound. A *Corporal* battalion has 250 men. Each battalion has two batteries—a firing battery and a service battery. There are three launchers to a battalion. *Corporal* battalions have been stationed in Europe.

Redstone Missile is another in the Army family. The first U. S. Army unit to fire the Army's *Redstone* missile was announced in March 1956. The Army uses surface-to-surface artillery missile units armed with *Redstone* and other Army missiles to extend and supplement the range and firepower of artillery cannon. *Redstone* is the largest surface-to-surface ballistic guided missile successfully fired in this country. It is named for the place of its development, the Army's Redstone Arsenal at Huntsville, Ala.

Among the latest additions to the Army's arsenal are the *Lacrosse*, surface-to-surface guided missile, and *Dart*, an antitank guided missile.

These represent the better known guided missiles, but by no means give the whole picture of Army missile development.

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AIR FORCE

Matador (TM-61A), a tactical missile of subsonic speed, received its first flight in December 1950. It has a wingspan of 28.7 feet, length of 39.6 feet. Ground-launched by a rocket booster from a roadable launcher, it is powered by a jet engine (J-33-A-37), controlled electronically in flight by ground personnel, and is capable of delivering conventional or nuclear weapons several hundred miles. *Matador* squadrons are already stationed in Germany and Orlando, Florida. A later version, the TM-61B, is longer and faster and has greater range and improved guidance system. It has been tested in successful launching at Holloman Air Development Center, New Mexico.

Falcon (GAR-1) is a guided aircraft rocket of supersonic speed under development since 1947; it was test-fired in 1951. Production was ordered in 1955 and it became operational in March, 1956. *Falcon,* which weighs slightly over 100 pounds and is approximately six feet long, is powered by solid rocket propellant and electronically fired and guided. Designed for under wing or pod installations, it can be carried in quantity by intercepter aircraft, launched miles from target, and automatically "home" on target. During its test period, it knocked down target planes without carrying explosive warhead.

Snark (SM-62), a long-range strategic missile, is a winged pilotless bomber powered by a turbo-jet engine, and is the first U. S. long-range missile to be test-flown. It is considered to have range, accuracy and load-carrying capabilities as good as ballistic missile types.

Navaho (SM-64), another long-range strategic missile, is rocket-launched and air-breathing. It is considered to have range, accuracy and load carrying capabilities as good as ballistic missile types.

Rascal (GAM-63), a long-range guided missile, is a rocket-powered pilotless bomber designed to be carried by strategic bombers and released miles from its objective to proceed at high speed to target.

Bomarc (IM-99) is a long-range intercepter guided missile of supersonic speed. Successful experimental launchings at Patrick Air Force Base are now a regular part of the development program. A pilotless guided missile, it is launched from the ground and designed to seek out and destroy enemy aircraft at great distances from its launching site.

Intercontinental Ballistic Missiles, including the *Atlas* and *Titan* ICBM, are now under development. Many of the major components and sub-systems are similar for the ICBM-IRBM. This is expected to accelerate their development and greatly reduce the overall cost of the ICBM-IRBM program.

NIKE WATCH DOGS—*Nike* guided missile batteries help protect cities and coast of U.S. from enemy air attack.

From the above you can see the importance of the guided as a weapon in each of the armed sevices. And, as is the case with Navy guided missiles, this is only part of the story of guided missile development in the Army and Air Force.

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AIR RESEARCH AND DEVELOPMENT COMMAND engineers have created a man-made "brain"—a computing device which, in the language of electronics, has a memory of 4096 words of 48 "bit" capacity.

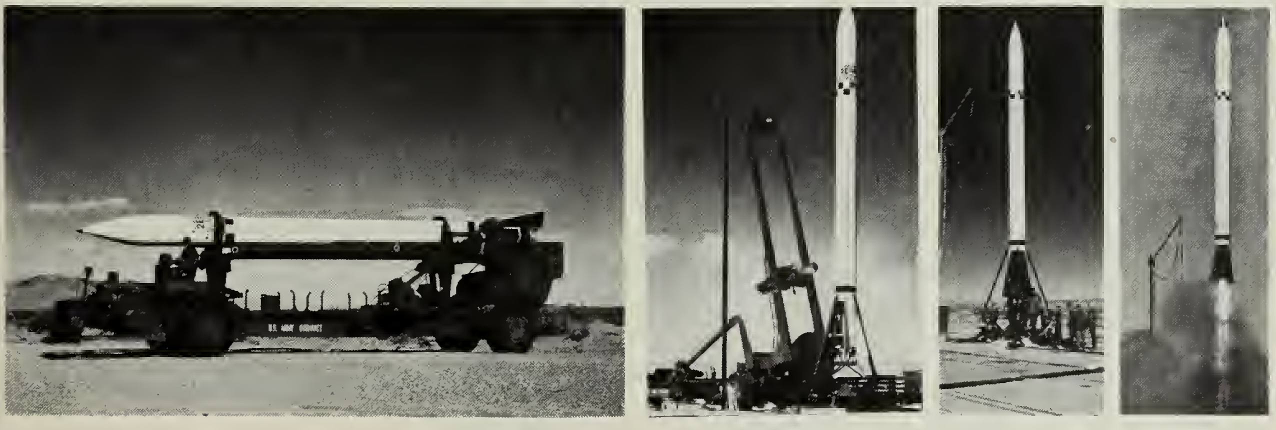
Known as FLAC (Florida Automatic Computer), it analyzes large quantities of missile flight test data in a small fraction of the time formerly required.

Dubbed "Mr. Genius" by its creators after five years of development work, the machine has one of the largest single magnetic core memories of any computing device in use today.

FLAC was developed to fill the Air Force Missile Test Center's need for an extremely versatile computer which could assimilate large amounts of varying types of information at high speed and answer quickly.

An unusual punch-paper tape type of reading device in the computer has been developed. The tape enables reading of up to 300 characters per second by the computer. Six hundred characters are expected when development work is completed.

KING-SIZE fire support for soldiers is furnished by Army's *Corporal,* surface-to-surface, guided missile.



NAVY GUIDED MISSILE students take a practical approach while learning about what goes on inside a missile.

Schools and Courses for Missileers

HERE'S A RUNDOWN of the various schools that provide instruction in the operation, maintenance and repair of ship-launched guided missiles and associated test equipment. Instruction for both officers and enlisted personnel is provided.

All requests for quotas to these schools should be directed via the chain of command to the Chief of Naval Personnel with the exception of the *Regulus* Propulsion, Class "C" Course, which should be directed to ComServLant or ComServPac as appropriate.

Courses conducted at the U.S. Naval Guided Missiles School, Fleet Air Defense Training Center, Dam Neck, Virginia Beach, Va., are:

- **GUIDED MISSILEMAN — CLASS "A"** — (24 weeks). This course covers such areas as: mathematics applicable to electricity, electronics and guided missiles; laboratory and classroom work in physics pertaining to aerodynamics, hydraulics, gases, forces and motion; laboratory and classroom work in basic electricity and electronics; special electronic circuits applicable to guided missile control and guidance; hydraulics applicable to guided missile internal control; practical work in trouble-shooting and maintenance of guided missiles and test sets; practical experience in testing and preparing surface-launched missiles for flight, and general safety precautions.

Personnel Eligible — SA and SN, Regular or Reserve, having normal color perception, normal hearing and qualified for sea duty. Must be on active duty with three years' obligated service and scheduled for assignment as guided missileman strikers. Secret clearance required. Combined ARI and MECH scores must be at least 110.

Upon successfully completing the 24-week class "A" course, students will automatically be enrolled in either the *Regulus* GS Class "C" or *Terrier* GS Class "C" course.

NAVYMEN STUDYING ship-launched missiles receive instructions on the wing folding operation of *Regulus,* surface-to-surface guided missile.

- **REGULUS GS—CLASS "C"**—(12 weeks). This course provides instruction regarding testing, alignment, adjustment, replacement and repair of the internal guidance and control components of the *Regulus* missile and its test equipment. It also covers handling, stowage, test and preparation of *Regulus* sections and components, associated test equipment; handling and launching equipment; safety precautions; records and reports.

Personnel Eligible — Graduates of the Guided Missileman, Class "A" Course; GS convertees upon completion of basic electronics training and other petty officers of the GS rating. Must be on active duty with 18 months' voluntary obligated service, and be assigned or scheduled for assignment to *Regulus* guided missile billets. Secret clearance required.

- **TERRIER GS — CLASS "C"** — (12 weeks). The scope for this course is the same as for the *Regulus,* Class "C" School outlined above, except that it deals with the *Terrier* missile.

Personnel Eligible — The same as for *Regulus* Class "C" School except that personnel will be assigned or scheduled for assignment to a *Terrier* missile billet.

- ***REGULUS ORDNANCE AND PROPULSION—CLASS "C"***—(12 weeks). Covers a wide range of subjects in connection with missile propulsion system and launching. It covers in detail: configuration, characteristics, capabilities and employment of the various surface-launched guided missiles and associated equipment; operation, maintenance and repair of *Regulus* handling and launching equipment, propulsion system and accessories, and structural components; handling, stowage, assembly, test, alignment, adjustment, replacement and, where applicable, repair of *Regulus* propulsion system and accessories, explosive and structural components, and hydraulic/pneumatic systems not associated with missile internal guidance and control; and safety precautions.

Personnel Eligible — All Regular or Reserve petty officers of GM, EN, TM(SS), AD and EN(SS) ratings, who have normal color perception, normal hearing and are qualified for sea duty. Must have 18 months' obligated service, and be scheduled for assignment to or assigned to a *Regulus* ordnance and propulsion billet. Secret clearance required. Combined ARI and MECH score must be at least 100.

- ***SURFACE-TO-SURFACE MISSILES*** — (Officers) — (12 weeks). Configuration, characteristics, capabilities and employment of the various surface-launched guided missiles; surface-to-surface guided missiles familiarization, components, test and associated equipment; test, alignment, adjustment and replacement of surface-to-surface guided missiles internal components and test equipment; maintenance and repair problems and procedures for surface-to-surface components, test and other associated equipment; handling, stowage, test and preparation of surface-to-surface guided missiles sections and components.

Personnel Eligible — All officers on active duty with the rank of LCDR and below having 1100, 1710, 1750 and 1300 designators, who are scheduled for assignment or assigned to SSM billets. Secret clearance required. Previous electronics experience or training essential.

- ***GUIDED MISSILE INDOCTRINATION*** — (Officers) — (one week). Configuration, characteristics, capabilities and employment of the various surface-launched guided missiles and associated equipment; guided missile systems, installations, organizations, operations, logistics and safety precautions.

Personnel Eligible — All officers on active duty who are scheduled for assignment or assigned to administrative, planning or control billets concerned with surface-launched guided missiles. Secret clearance required.

Courses available at the U.S. Naval Guided Missiles School, Pomona, Calif., are:

- ***SURFACE-TO-AIR MISSILES*** — (Officers) — (12 weeks). This course is similar to the officers' surface-to-surface missile course outlined above but deals with the *Terrier* and other SAM missiles.

Personnel Eligible — All officers on active duty with the rank of LCDR and below having 1100, 1710, 1750 and 7660 designators. who are scheduled for assignment or assigned to SAM missile billets.

- ***GUIDED MISSILES INDOCTRINATION*** — (Officers) — (two weeks). The courses and eligibility requirements are identical to those given at U.S. Naval Guided Missiles School at Dam Neck, Va., except for being a two-week course instead of one.

- ***TERRIER GS—CLASS "C"***—(Enlisted) — (12 weeks). The same courses and eligibility requirements as outlined above for the *Terrier* Class "C" School at Dam Neck, Va.

THE NAVY CURRENTLY conducts three courses for officers and enlisted personnel who work with or are slated for assignment to billets in connection with AIR-LAUNCHED GUIDED MISSILES.

These schools include the Basic Class "A" Aviation Guided Missilemen School maintained by the Chief of Naval Air Technical Training, NAS, Memphis, Tenn., and the Class "O" and "C" Air Launched Guided Missile (General) Maintenance Courses, both conducted at the Naval Air Weapons Systems School, Naval Air Technical Training Center, NAS., Jacksonville, Fla.

All requests for enlisted quotas for the Class "A" and "C" schools should be directed via the chain of command to the Chief of Naval Personnel (Attn: Pers B2132) while quotas for the officer's course should be directed to CNO (OP541).

Here's a resume of these schools and the eligibility requirements:

- ***CLASS "A" BASIC AVIATION GUIDED MISSILEMAN SCHOOL***—(Enlisted)—24 weeks.

This basic course leads to the fulfillment of the technical requirements for Aviation Guided Missileman Third Class. The training, while

KEEPING UP with the times, Navy aviation ordnancemen have the word passed to them on the *Sparrow* guided missile that will arm their squadron's fighters.

directed primarily at the technical qualifications for GF3, also covers the minimum factors required for advancement to GF2.

This six-month course provides training in connection with the fundamentals of electronics; MHF, VHF, and UHF transmitter theory; radar fundamentals; gyros, synchros and servo mechanisms; orientation in aviation guided missiles.

Personnel Eligible—All Navy and Marine Corps male enlisted personnel having: 36 months' obligated service; combined GCT and ARI score of 115, with a minimum score of 50 on each, and a MECH score of 55; graduated from Class "P" Aviation Fundamentals School (Electronics Occupational Group) or equivalent knowledge; normal color perception and hearing. Confidential clearance required.

- ***CLASS "C" AIR LAUNCHED GUIDED MISSILES (General) MAINTENANCE COURSE***—(Enlisted)—23 weeks. Provides selected candidates with the theoretical and practical knowledge required for the maintenance of air launched guided missiles.

Successful completion of this course qualifies the student for change in rating to Aviation Guided Missileman. The curriculum offered covers the fundamentals of gyroscopes and guidance systems, components and theory of *Sparrow* missiles and related test equipment.

Personnel Eligible—ATANs with one year of duty with the fleet or ATs in pay grade E-4 and above. In addition, other personnel in Group IX ratings who have successfully completed the preliminary electronic training for rate conversion in accordance with BuPers Inst. 1440.13. Two years' obligated service and a Secret clearance is required.

- ***CLASS "O" AIR LAUNCHED GUIDED MISSILES (General) MAINTENANCE COURSE***—(Officers)—23 weeks.

This school provides selected officers with the theoretical and practical knowledge required for the maintenance of Air Launched Guided Missiles.

Personnel Eligible—All officers on active duty having an adequate electronics background who are currently serving in or slated for assignment to an air-launched guided missile billet. Secret clearance required. OPNAV Inst. 1510.1F sets forth requirements.

PASSING THE WORD—Naval Reserve officers are keeping up with Navy's missiles through orientation course at NOL, White Oak, Md.

Reservists Study Guided Missiles

Reserve officers on inactive duty are staying on top of guided missile developments through specialized training courses offered in various parts of the country.

A course in *Guided Missile Orientation* is now underway at the Naval Ordnance Laboratory, as part of the Naval Reserve Officers School program.

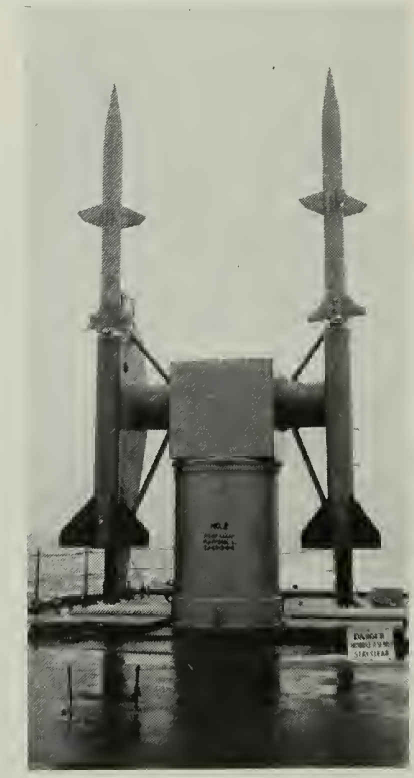
The course, which is classified "confidential," includes aerodynamics, propulsion, guidance methods, principles of ballistics missiles and the tactical employment of guided missiles.

Among the individual missiles under study are *Regulus, Talos, Sidewinder, Tartar* and *Terrier.* Missile installations in such ships as USS *Galveston* (CLG 93), now being converted to a guided missile ship, and USS *Canberra* (CAG 2) are also part of the guided missile curriculum.

The course is serving as a "pilot" for courses to be offered in the NROS program starting in the 1957-58 school year. NROS courses provide college-level training in both general and technical subjects.

Most courses are divided into two semesters of 20 drills each.

The Bureau of Ordnance also offers guided missile training to qualified Reserve officers during active duty for training periods. BuOrd courses include *Guided Missile Indoctrination,* a two-week course given at the Guided Missile School, Pomona, Calif., a similar course of one week's duration at Dam Neck, Va., and the two-week BuOrd Guided Missile Course, Washington, D. C.



RESERVE MISSILE course includes study of GM installations on ship.

Here Are Study Guides for Guided Missileman Ratings

If you are interested in advancing in rate or changing to one of the giuded missile ratings, (either Guided Missileman (GS) or Aviation Guided Missileman (GF), perhaps the wisest move you can make would be to ask your division officer for a copy of the pertinent Study Guide. There are three issued for each rating—PO3, PO2, and PO1 and Chief. Based upon the *Manual of Qualifications for Advancement in Rating* (NavPers 18068, Rev.), each one tells what you must study for advancement in your chosen field.

One section of each study guide consists of a table listing the major subject areas. Each subject is associated with one or more study references and also with the one or more qualifications to which it pertains. Another section contains a list of the reference books needed. The third section covers advancement.

Below you will find a list of the publications to be used and studied in preparing for advancement exams. The manuals listed are those used by examining authorities in preparing questions for service-wide competitive examinations, although in practically all cases only parts of the books listed will apply to a particular rate. As you know, men trying for the higher grades in a rating are expected to know all the material required of the lower rates, plus that required for the rate they desire.

"I shot a missile into the air. It fell to the earth, I know not where."

Guided Missileman (Surface)—GS3

BuShips Manual
USN Safety Precautions, OpNav 34P1
OP 2125
OP 2199, Vols. 1 and 2
Blueprint Reading, NavPers 10077-A
Basic Hand Tool Skills, NavPers 10085
Electricity for Fire Controlmen and Fire Control Technicians, Vol. 1, NavPers 10170
Electronics Technician 3, NavPers 10188
Fireman, NavPers 10520-A
Machinist's Mate 3 & 2, NavPers 10524-A
Electrician's Mate 3, NavPers 10548-A
Damage Controlman 3 & 2, NavPers 10571-C
Electricity, NavPers 10622-B
Electronics for Guided Missiles, NavPers 10863
Basic Hydraulics, NavPers 16193

Guided Missileman (Surface)—GS2

BuOrd Manual
OP 2199, Vols. 1 and 2
Human Behavior and Leadership, NavPers 10058
Basic Electronics, NavPers 10087
Electricity for Fire Controlmen and Fire Control Technicians, Vol. 1, NavPers 10170
Electronics Technician 3, NavPers 10188
Electrician's Mate 3, NavPers 10548-A
Electricity, NavPers 10622-B
Electronics, Administration and Supply, NavPers 10853
Electronics for Guided Missiles, NavPers 10863

Guided Missileman (Surface)—GS1 and Chief

OP 1303
OP 2199, Vols. 1 and 2
Electricity for Fire Controlmen and Fire Control Technicians, Vol. 1, NavPers 10170
Fire Control Technician 1 & C, Vol. 1, NavPers 10176
Electronics, Administration and Supply, NavPers 10835
Electronics Technician 3, NavPers 10188
Electronics for Guided Missiles, NavPers 10863
Radar Electronics Fundamentals, NavShips 900,016
Radar System Fundamentals, NavShips 900,017

Aviation Guided Missileman—GF3

Electronics for Guided Missiles, NavPers 10863
Electronics Technician 3, NavPers 10188
Electronics Technician 2, Vol. 1, NavPers 10190-A
Physics for Electronics Technicians, NavPers 10095
Electricity, NavPers 10622-B
Aviation Electrician's Mate, NavPers 10319
Basic Hydraulics, NavPers 16193
Aircraft Hydraulics, NavPers 10332-A
Blueprint Reading, NavPers 10077
Hand Tools, NavPers 10306-A
USN Safety Precautions, OpNav 34P1
BuAer Technical Note 15-48 (with Appendix)
Basic Electronics, NavPers 10087
Radar Electronics Fundamentals, NavShips 900,016
Standard First Aid Training Course, NavPers 10081
Basic Hand Tool Skills, NavPers 10085

Aviation Guided Missileman—GF2

Flight Engineering, NavPers 10395-A
Electronics for Guided Missiles, NavPers 10863
Basic Hand Tool Skills, NavPers 10085
Basic Electronics, NavPers 10087
Physics for Electronics Technicians, NavPers 10095
Supplementary Readings in Fundamental Naval Electronics, Part 1, NavPers 10808
Electronics Technician 2, Vol. 1, NavPers 10190-A
Radar Electronic Fundamentals, NavShips 900,016
Electrician's Mate 1 & C, NavPers 10550-A
Electrical and Electronic Symbols, Mil-Std-15A
Aircraft Hydraulics, NavPers 16193
BuShips Manual, NavShips 250-000-49
Electronics Technician 3, NavPers 10188
Electricity, NavPers 10622-B
Aviation Electrician's Mate, NavPers 10319
Aviation Ordnanceman 3 & 2, Vol. 1, NavPers 10345

Aviation Guided Missileman—GF1 and Chief

Radar Electronic Fundamentals, NavShips 900,016
Basic Electronics, NavPers 10087
Radar System Fundamentals, NavShips 900,017
Supplementary Readings in Fundamental Naval Electronics, Part 1, NavPers 10808
Microwave Techniques, NavShips 900,028
Timing Circuits, NavShips 900,013
Electronics for Guided Missiles, NavPers 10863
Fire Control Technician 1 & C, Vol. 1, NavPers 10176
Gun Fire Control System, Mk 56, Op 1600 (Preliminary)
U. S. Navy Synchros, Op 1303
General Training Course for Petty Officers, NavPers 10055
Aviation Supply, NavPers 10394-C
Aviation Storekeeper, NavPers 10396-A
Aircraft Instruments, NavPers 10333-A
Electronics Technician 2, Vol. 1, NavPers 10190-A
Electrician's Mate 1 & C, NavPers 10550-A
Electronics Technician 3, NavPers 10188

THE WORD

Frank, Authentic Advance Information On Policy—Straight from Headquarters

• **NUCLEAR WEAPONS MAN** — A major change in the enlisted rating structure has taken place with the establishment of the Nuclear Weapons Man (NW) general service rating.

This newest rating in the enlisted rating structure is based upon the urgent needs of the special weapons program. At present, this program is manned by ETs, EMs, GMs, AOs, IMs, MRs, MEs, AKs, YNs and similar ratings.

The new rating, as approved by the Secretary of the Navy, will provide personnel qualified in the electrical and mechanical maintenance of nuclear weapons. The highly technical electronic maintenance associated with nuclear weapons, however, will not be a duty of the new rating, but will be performed by an appropriate existing rating.

By the establishment of a rating to fit the special weapons program, personnel in the program will be given definite recognition, and provided with a clear path of advancement.

It is expected that interim qualifications for advancement in rating will be published by Chief of Naval Personnel directives. Final qualifications will be published in a forthcoming change to the *Manual of Qualifications for Advancement in Rating* (NavPers 18068, Revised).

• **ADVANCE STUDY FOR AT(B) SCHOOL** — If you are awaiting assignment to the Aviation Electronics Technicians Class "B" School, you will find it extremely beneficial if you take any or all of the following courses before reporting to the school:

Group I—Enlisted Correspondence Courses

(1) *Mathematics, Vol. 1,* NavPers 91219
(2) *Mathematics, Vol. 2,* NavPers 91220
(3) *Electricity,* NavPers 91225
(4) *Electronics Technician 3,* NavPers 91373-1
(5) *Electronics Technician 2, Vol. 1,* NavPers 91374-1
(6) *Electronics Technician 2, Vol. 2,* NavPers 91375

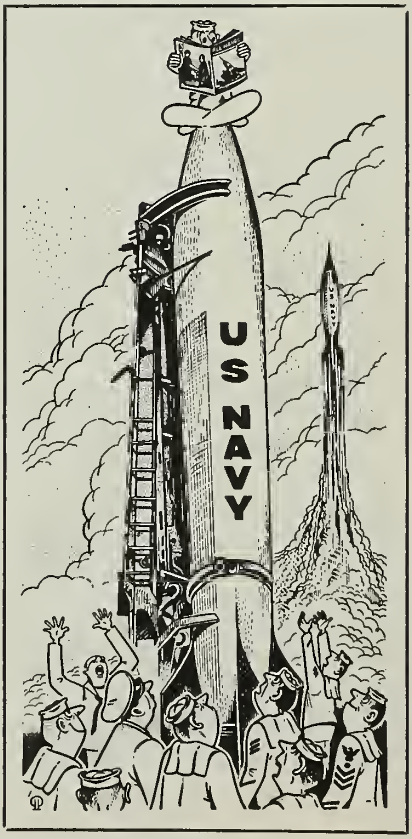
Group II—Navy Training Courses

(1) *Essentials of Mathematics for Electronics Technicians,* NavPers 10093A
(2) *Advanced Mathematics for Electronics Technicians,* NavPers 10094
(3) *Basic Electricity,* NavPers 10086
(4) *Basic Electronics,* NavPers 10087

These courses are not intended as a substitute for the advanced electronics training given at the AT(B) School but are recommended so you will have the fundamental knowledge required and they will further serve as a means of re-establishing good study habits.

ATs in pay grade E-5 and above should complete as many as possible, with a minimum of two, of the Navy Training Courses listed in Group II, particularly items (1) and (2).

Personnel in other ratings, such as ALs or other prospective enrollees in any of the conversion programs that involve AT(B) School attendance, should make an attempt to complete all of the items in either Group I or II.



These lists are primarily intended for candidates to the AT(B) School, but are equally important if you are waiting assignment to the various schools under the GS, GF and AQ conversion programs.

• **ANNAPOLIS STADIUM** — Construction of a Navy-Marine Corps memorial stadium at the Naval Academy, Annapolis, Md., begins this spring as a memorial to everyone serving today in the Navy and Marine Corps as well as those who have earlier served.

The stadium will be built with private funds. More than a million dollars has already been accumulated in a memorial stadium fund and construction will be started with this money. To raise the amount required to complete the stadium the Naval Academy Athletic Association has been receiving voluntary contributions.

While no solicitation of funds within the meaning of SecNav Inst. 5340.1A will be made, voluntary contributions may be accepted and sent directly to the Treasurer, Naval Academy Athletic Association, Annapolis, Md. Names of ships and stations contributing will be recorded on bronze plaques at the stadium.

• **ALs MAY CHANGE RATE TO RM** —Although the Aviation Electronicsman (AL) rating is being disestablished, some ALs apparently do not desire to make the scheduled conversion to Aviation Electronics Technician (AT).

If you are an AL and do not desire—or cannot qualify for—the AT conversion, you may be assigned to a radioman (RM) billet for employment directly in the performance of communications duties. Since the qualifications for AL and RM are similar in many respects, it is felt that this procedure will permit you to qualify for RM before the AL rating is terminated. For men in pay grade E-6 and below, this "on-the-job" training also offers an excellent opportunity for advancement.

Once assigned to a radioman billet, you may request a change in rating (in accordance with BuPers Inst. 1440.5B) as soon as you become qualified in RM duties. If you meet all qualifications except the

PASS THIS COPY ON — Don't take off with this magazine . . . This issue is intended for nine other readers.

speed requirements of the CW performance tests (transmitting and receiving), the Chief of Naval Personnel will consider requests for a delay in meeting the RM performance test speed requirements.

Commanding officers have been requested to report to the Chief of Naval Personnel on the progress being made by each of the 50 ALs who are being ordered to duty in large communication activities. The commanding officer will report after each man has completed six months' duty at the station.

• **STUDY GUIDE FOR FUTURE OFFICERS** — Do you have your eye on possible officer status? If so, in BuPers Inst. 1560.12 you will find a list of recommended study material which will be of interest to you.

It is, in the words of the instruction, "recommended for review for the examination administered to inservice personnel nominated for appointment to commissioned status under the Integration Program, the Limited Duty Officer Program, and the Warrant Officer Program (W-1)."

The Navy tests and correspondence courses listed will prove useful review materials for those naval knowledge questions included in part 2 of the examination—and the USAFI self-teaching materials, correspondence courses and examinations cover the educational requirements contained in part 3.

In each instance, you should choose either self-teaching material or correspondence courses depending on how thoroughly you need to review. If you find you need more background knowledge before studying the courses listed, you should consult the current USAFI catalog, in which prerequisites are suggested under each course description.

Seawolf at Sea On Nuclear Power

USS *Seawolf* (SS(N) 575), second of the Navy's nuclear submarines, is currently undergoing builder's trials, including submergence tests, and is now operating at sea on nuclear power.

The submarine's trials were delayed several months by trouble with her heat transfer system, which uses liquid sodium as an agent, instead of the pressurized water used in USS *Nautilus* (SS(N) 571). The failures, which first occurred last August, have been overcome by repairs and modifications, including bypassing of the steam superheater.

The I & E officer in each ship and station has been requested to cooperate with your division officer in making the material available.

• **EXAMS FOR TEMPORARY OFFICERS** — It is planned to introduce written examinations for USN temporary officers in fiscal year 1958, with the first examinations to be given for those selected for promotion in that year.

A forthcoming revision of BuPers Inst. 1416.1B will prescribe specific procedures for these examinations, including phasing of examinations and exemptions. (Instruction 1416.1B is concerned with the determination of professional fitness for promotion of officers. At present, temporary officers are exempted from the requirements.)

BuPers Inst. 1416.3 sets forth a study plan for the guidance of temporary officers in their selection of courses which will prepare them for higher grades. BuPers Notice 1416 (11 Dec 1956) which announces the introduction of written examinations for temporary officers, also urges each officer affected to develop himself through self study, using Instruction 1416.3 as a guide, both in preparation for examinations and to earn exemptions within specified fields corresponding to his category.

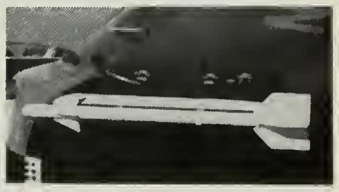
• **EMERGENCY RATING CHANGES** —The emergency service ratings of Boilerman G (Shipboard Boilerman) and Boilerman R (Boiler Repairman) will be dropped from the enlisted rating structure, according to BuPers Notice 1223 of 31 Dec 1956.

Directives setting forth the procedure for effecting the changes have not yet been published. Until they are promulgated, personnel holding the affected ratings will continue to advance in those ratings, and will not be changed from one rating to another.

Elimination of the two ratings was approved by the Secretary of the Navy after a study of findings presented by the Permanent Board for Review of the Enlisted Rating Structure. The board is responsible for the study and evaluation of all recommendations for new ratings and all recommendations for the elimination of ratings which no longer provide for the most effective use of naval manpower.

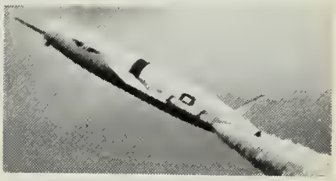
QUIZ AWEIGH

This month's issue is devoted to Navy's efforts and developments in the guided missile field. As you well know, guided missiles are very much in the limelight today and certainly you as a Navyman should know as much about them as you can dig up. See how well you can recognize some of these missiles and "guide" yourself to a 4.0. If your radar gets jammed, turn to page 58 for guidance.



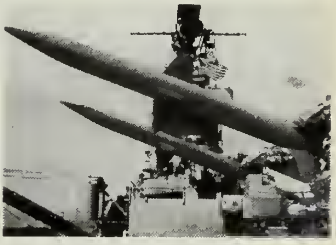
1. The above missile has been "cover missile" for a number of magazines and you might have seen it actually operate over television. It is the (a) *Terrier* (b) *Regulus* (c) *Talos*.

2. This missile is now used as the primary weapon of some ships and is a/an (a) air-to-air missile (b) surface-to-air missile (c) surface-to-surface missile.



3. You should easily recognize this (SSM) surface-to-surface missile as the (a) *Loon* (b) *Petrel* (c) *Regulus*.

4. During development of this missile, one of the outstanding features was that (a) this missile gave absolutely perfect readings (b) it was simple in design and cheap to build (c) it could be fitted with landing gear and used many times.



5. If you've read this issue over carefully, then you'll readily recognize this air-to-air (AAM) missile as the (a) *Sidewinder* (b) *Sparrow* (c) *Petrel*.

6. Another item related in these pages tells you that this missile received its name because it (a) has the uncanny sense of direction of a bird (b) was developed in the desert and has the sting of a rattler (c) is used mostly at sea.

Guided Missile Orientation Courses for Officers Held At Norfolk and San Diego

To familiarize senior officers of the Fleet and shore commands with the functioning, capabilities and limitations of guided missiles, the Fleet Training Centers at Norfolk, Va., and San Diego, Calif., are conducting a series of Guided Missile Orientation Courses.

Attendance at both courses is limited to officers of the rank of LT, USN, (CAPT, USMC), and above. Since these courses are intended to acquaint senior officers with the developments in guided missile warfare, a technical background is not required. However in order to obtain the maximum benefits from the Guided Missile Orientation Courses, it is desirable that students be graduates of the Special Weapons Orientation or Employment Courses before they attend.

There is a quota for 24 students for each of the nine classes (GMO 28 through 35) scheduled from 26 Mar through 19 Nov 1957. Of that number 19 students are assigned through fixed quotas assigned to designated commands while the remaining five are assigned from BuPers controlled activities through individual requests to the Chief of Naval Personnel (Pers C1235). A schedule of the convening dates and quotas for each class is published in enclosure (2) of BuPers Notice 1540 of 4 Dec 1956.

Requests for quotas to the five-day course (C380) at San Diego should be directed to the Chief of Naval Personnel (Pers C1235) or Commander Training Command, U. S. Pacific Fleet. Classes at San Diego convene on the first Monday of each month.

Personnel attending the Guided Missile Orientation Course at Norfolk should hold a Top Secret clearance, while a Secret clearance is required for the San Diego course.

"But you may never get another chance to go down in naval history."

Learning How To Air Launch Guided Missiles

It takes more than instinct and a willing heart to make a good guided missileman. The Air Launched Guided Missile branch of the Naval Air Weapons Systems School at Jacksonville, Fla., is typical of the schools which provide the necessary training.

Commissioned in 1953, this school, the first of its kind in naval history, has supplied more than 500 highly qualified officers and enlisted personnel since its founding.

In the complex and technical field of guided missiles, the instructors are the most highly qualified technicians that it's possible to obtain within the Navy—and the level of training demands students of the same caliber. Small classes assure the best opportunities for study.

The Air Launched Guided Missile branch presents a 23-week course in three phases of instruction. Phase I includes instruction on basic missile electronics, servomechanics M theory, gyroscopes, hydraulics and guidance systems.

Phase II teaches the operation of missile test equipment, component tests of missile sections, and component repair.

Phase III covers over-all systems test of the missiles and the systems test equipment.

Upon completion of the course, graduates are qualified to test, maintain, operate, and repair missiles and their associated test equipment.

Books on Guided Missiles and Rockets Sent to Ships, Stations By Library Services Branch

Many aspects of the fields of guided missiles and rocket research are classified; however there are several books on these subjects which have been made available by the Library Services Branch of the Bureau to many ship and station libraries. Here are some of them.

Guided Missiles in War and Peace, by Nels A. Parson, Jr., is a good one with which to start. Here, you'll find a semi-technical briefing which covers the importance of this latest of weapons and explains its purpose as well as its construction. There is an explanation of air-to-surface, air-to-air, surface-to-air and surface-to-surface missiles, as well as the anti-missile guided missile developments. The aerodynamics, guidance and propulsion are described, and warfare use by the Navy, Air Force and Army is discussed. This survey of "bullets with brains" makes it possible for any Navyman to learn how they work—and why.

The historical angle, and the men who made rocket and missile history, may be found in ***The Men Behind the Space Rockets,*** by Heinz Gartman, a well known expert on rocket research.

The development is described by means of Hermann Ganswindt, the disregarded fanatic who produced the first realistic plan for a space ship; Tsiolkovski, the obscure Russian schoolmaster who bequeathed his research work to the Communist Party; Robert H. Goddard, the American professor who designed the first liquid-propelled rocket; Herman Oberth, the pioneer of German rocket research, who is now at work in America; and, says Gartman, perhaps the most brilliant of them all, Wernher von Braun, who was chief designer of the V-2.

The Viking Rocket Story, by Milton W. Rosen, tells how the largest American rocket to explore the upper atmosphere was conceived, how it was designed, built and launched. If you read the book, you'll learn that

Viking isn't just one rocket, it's a series. The book tells of the problems, frustrations, and triumphs accompanying the launching of each. Through skillful presentation, you'll come to know the men who build and fire each rocket, will see the rocket through their eyes and share their experiences.

Rocket Pioneers, by Beryl Williams and Samuel Epstein, is a rocket of another color. It provides an international roundup of the men of the last 150 years whose imagination and foresight glimpsed an era of transportation possible for all men in the years to come.

In his own way, each of these men contributed to such rockets as *Viking* and *Vanguard,* as well as to rockets of the future.

It begins with Sir William Congreve, who astounded the military men of Napolean's time with a war rocket that was the forerunner of the present-day bazooka. It tells of Jules Verne, who stirred others to dream of ingenious space ships; of Tsiolkovsky, who provided the mathematics and basic theories that led others to the conviction that space ships would have to be powered by rocket motors. Contributions by Goddard, Oberth, von Braun, as well as many others, are also told here.

Men, Rockets, and Space Rats, by Lloyd Mallan, is slightly off the path of this month's theme, but if you liked the volumes earlier named, you'll like this one. Jaunty, respectful and conversational in style, it tells in considerable detail of the testing and actual construction being carried out by the Air Force and private concerns in connection with government laboratories. White Sands Proving Grounds, the *Aerobee,* the amazing deceleration and acceleration tests endured by Col. Stapp, and the research balloons (earlier described in ALL HANDS) are highlights of some of the chapters. They all add up to a fairly well rounded view of present and future space flights. Possibilities of actual space flights are discussed in the last chapter.

The *Vanguard* satellite is a mere child's step to the space travel boys who almost convince you that a jaunt to the moon or Mars is just around the corner. ***The Exploration of Mars,*** by Willy Ley and Wernher von Braun, and ***Exploring Mars,*** by Robert S. Richardson, are two examples.

Exploration, for instance, is a blueprint for actual travel laid out with such precision and confidence that you're inclined to reach for a time table. It discusses specifications of the ship, selection and training of crew members, and actual details of the trip. *Exploring* provides a believable description of a trip into outer space, how rocket travel may be achieved, and how to plot a course to Mars and the moon. The author provides astronomers' answers to questions concerning the life, climate and physical conditions of Mars, and tells you how you can locate it in the sky. You'll have to apply for your own reservations for the trip.

WHAT'S IN A NAME

Target Drones

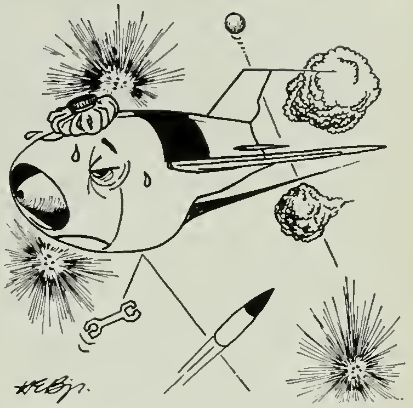
The shiny red propeller-driven miniature planes which have served as targets for much of the Navy's antiaircraft fire in recent years are making way for a bright new brother—a target drone whose turbojet engine affords near-sonic speed and altitudes approaching 40,000 feet. A target drone, incidentally, is defined as a remotely controlled, self-propelled airborne target system, and is designated by the letters "KD;" conventional planes, (such as the World War II F6F) which have been converted for use as remotely controlled targets, do not share the designation.

Known as the *Firebee,* or KDA-1, the new drone is a logical step in the development of an idea which dates from World War I. The military potential of automatically controlled aircraft was recognized as early as 1914, when the Germans are known to have shown an interest in them. In our country, the Naval Research Laboratory and Bureau of Aeronautics in the early 20s (see page 18) collaborated in the development of radio-controlled aircraft—one of our first steps in the development of guided missiles.

In September 1924, the first successful automatic aircraft flight in this country was made at Dahlgren, Va., when a pilotless seaplane under radio control took off, flew around and then landed without mishap. The guidance equipment, developed by the Naval Research Lab, bore many resemblances to later German-developed command guidance systems.

By 1935 a project was undertaken to convert obsolete planes into radio-controlled drones for use as antiaircraft gunnery targets. *USS Ranger* (CV4), in 1938, had the honor of being the first Fleet unit to fire against one of these drones, simulating a high-altitude bombing attack.

Since this introduction, target aircraft, either drone conversions of regular aircraft or specially designed small planes. have undergone many improvements and have become indispensable to Fleet training. Most sailors today are familiar with the snappy red KD2R-3 and KD6D-1 or KD6D-2, conventional propeller-driven target drones which have been pulling duty with the Fleet for the past 10 years or so.



But prop-driven aircraft—even target drones—haven't much chance against the defense systems of a jet age Navy, hence the need for targets like KDA-1. *Firebee,* which weighs approximately 1800 pounds, is designed to simulate the maneuvers of piloted jet aircraft. It is less than half the size of a modern fighter, however, with a wingspan approaching 12 feet and an over-all length of approximately 18 feet.

The *Firebees* may be launched either from the ground or from a piloted "mother" aircraft. A two-stage parachute system is used to decelerate the plane from its near-sonic speed and lower it to the surface. This system operates automatically in case of a hit, loss of radio contact, engine failure or on command from the operator.

KDA-1's automatic pilot setup is somewhat similar to those used in earlier KDs, with command control signals being initiated manually at a remote control box. These are received by a unit in the drone which translates the signals into action. Closing the guidance loop is a radar plotting board which gives a continuous display of plan-position and altitude of the drone.

Other missile and rocket volumes available at your ship or station library include: ***Satellite,*** by Eric Bergaust and W. Beller; a somewhat technical volume entitled ***Aerodynamics Propulsion Structures,*** by E. A. Bonney and others, which is one of a series under the general title of "Principles of Guided Missile Design; Rocket Propulsion," by Eric Burgess; and ***Frontier to Space,*** also by Burgess; ***Rockets and Missiles: Past and Future,*** by Caidin; ***Skyrocketing into the Unknown,*** by Charles I. Coombs; ***V-2,*** by Walter Dornberger; ***Development of the Guided Missile,*** by Gatland; ***Rockets and Guided Missiles,*** by John Humphries; and ***Rocket Propulsion Elements,*** by George P. Sutton.

DIRECTIVES IN BRIEF

This listing is intended to serve only for general information and as an index of current Alnavs and NavActs as well as current BuPers Instructions, BuPers Notices, and SecNav Instructions that apply to most ships and stations. Many instructions and notices are not of general interest and hence will not be carried in this section. Since BuPers Notices are arranged according to their group number and have no consecutive number within the group, their date of issue is included also for identification purposes. Personnel interested in specific directives should consult Alnavs, NavActs, Instructions and Notices for complete details before taking action.

Alnavs

No. 67 — Announced approval by the President of reports of selection boards which recommend USN and USNR officers for promotion to the grade of captain, Civil Engineer Corps; lieutenant commander, Medical Corps, Supply Corps, Chaplain Corps, Civil Engineer Corps, Dental Corps, Medical Service Corps, Nurse Corps; lieutenant, Line, Supply Corps, Chaplain Corps, Civil Engineer Corps, Medical Service Corps and Nurse Corps.

No. 1 — Announced change to Article C-9801, *BuPers Manual,* which is concerned with notification of aviation casualty.

No. 2 — Announced early construction of a Navy-Marine Corps Memorial Stadium at the Naval Academy, Annapolis.

No. 3 — Announced certain Navy publicity features during January.

No. 4 — Promulgated a basic change in the LDO procurement program.

No. 5 — Stated that certain companies operating within the state of Alabama and who were engaged in the sale of automobile insurance had been placed in receivership and policies cancelled.

Instructions

No. 1133.4A — Restates instructions permitting USN personnel who so desire to be discharged within one year of their normal expiration of enlistment for the purpose of immediate reenlistment.

No. 1440.20 — Outlines procedures for changing rating from Teleman to Radioman or Yeoman.

No. 1520.4B — Requests applications from USN and USNR officers of unrestricted line or LDO categories, other than aviation, for officer deep sea diving training.

No. 1560.12—Recommends study material for personnel who wish to plan a program of study in preparation for the exam administered those nominated for commissioned status.

QUIZ AWEIGH ANSWERS
QUIZ AWEIGH IS ON PAGE 55

1. (a) *Terrier.*
2. (b) Surface-to-air missile.
3. (c) *Regulus.*
4. (c) It could be fitted with landing gear and used many times over.
5. (a) *Sidewinder*
6. (b) Was developed in the desert and has the sting of a rattler.

WAY BACK WHEN

The First Rockets

Contrary to common knowledge and belief, the concepts pertaining to rockets and guided missiles are far from new. In fact, they're ancient.

History reveals that as early as 3000 B.C., the Chinese first used rockets. They were propelled by black powder and very similar to the skyrockets we use today on the Fourth of July. The Chinese also used them for celebrations and festivals.

Rockets were first used as a weapon of war about 1232 A.D. When defending the city of Pein-King, the Chinese attached arrows to rockets and used them not only as a weapon but as incendiaries.

News of the rockets spread fast and during the 13th and 14th Century history recorded a number of occasions during which they were used throughout Europe.

The idea of manned rocket flights is also far from new. As far back as the 15th Century the Chinese had their own "Captain Video"—named Wan-Hu, who attempted the first human rocket flight. He attached 47 rockets to a chair, secured two kites to its sides and then strapped himself in. As 47 coolies lighted the rockets at the same time, the Chinese scholar and scientists disappared in a cloud of flame and smoke. History does not record the results of the flight, as Wan-Hu has not been seen or heard of since.

Interest in rockets as a weapon of war continued to spread and by the early 1790's Indian troops used over a hundred thousand of them against the British. They weighed from six to eight pounds, were made out of an iron tube and had a wire fitted with a 10-foot bamboo pole to stabilize them in flight. As a result, the British immediately started a detailed study into the development of an artillery rocket. The outcome was such a success that they greatly influenced the results of the Napoleonic Wars and the War of 1812.

In 1846, William Hale, a U. S. inventor, developed the first stickless rocket. These early rockets had three curved vanes which caused them to rotate like an artillery shell. They came in two sizes—six and twelve pounds—and had a range of 2200 yards. During the year a rocket battery was formed at Ft. Monroe, Va., and by 1847 ten more batteries had been organized. These units were abolished shortly thereafter as interest in rockets began to lag when rifle and cannon companies proved to have increased accuracy during the Mexican War. Rockets came back into the foreground later, and today play an increasingly important role, as pointed out in the article on page 38.

GUIDED MISSILES

BEGINNING OF AN ERA

ALL HANDS SPECIAL SUPPLEMENT

In the preceding pages, ALL HANDS has attempted to describe, within its limitations of time and space, what guided missiles are and how they are likely to affect every man in the Navy today and tomorrow. As you have seen in the historical summary on pages 18 through 23, guided missiles and their ancestors are not nearly so recent as most of us think. Why the sudden interest in these "new" weapons today? Below, you'll find an indication of the trend of thinking on the part of Navy planners.

This unclassified material, somewhat condensed and revised for easier reading, has been made available as a special supplement through the courtesy of Guided Missiles Division, Office of DCNO (Air). Major portions of this report have appeared in the official Navy publication Combat Readiness.

ON THE BASIS OF THE JOB to be done, the Navy's guided missile program is concerned with two fundamental requirements:

- To provide a Fleet air defense adequate to support naval operations in the face of strong enemy oppositon.
- To provide our air, surface, and submarine striking forces with the capability of attack, utilizing the vast surfaces of the ocean areas and ready to be employed in the face of strong enemy defense.

These requirements stem from three simple realities:

- The gun is rapidly approaching obsolescence as a fully effective air defense weapon.
- International trends require that we view with concern plans that depend on certain foreign bases.
- In time, a competent enemy can be expected to develop defenses that will nullify, or make economically impracticable, our present and near-future attack techniques involving aircraft.

A decade of heavy expenditures and development effort has gone into the creation of our nation's guided missile potential. That potential is now in hand. It offers the only known solution to our two basic requirements. At the same time, the Navy does not claim that guided missiles will replace all types of guns for all types of targets or for all types of wars. The Navy does not predict that they will eliminate the need for aircraft. It does not maintain that completely new strategies and tactics must be devised. But, the Navy does want to be sure that its forces are properly equipped with missiles and that its strategic and tactical concepts are responsive to the potentials of these instruments.

THE MISSILE—as we know it today—is not considered the ultimate weapon. It has its limitations. It raises the questions of electronic jamming; the possible future altitude and speed capabilities of aircraft targets with which defensive missiles must contend; and, for the offensive missiles, the issue of whether nuclear warheads will be used in all types of wars.

THE F3H2M *Demon* is capable of carrying the disarmingly graceful *Sparrow* air-to-air guided missiles.

However, the Navy is firmly committed to converting its guided missile potential into its Fleet capability; for it is recognized that the missiles, as such, represent no capability whatsoever. That capability lies only in the operating forces—the ships, submarines, aircraft and men who will use the missiles. The process of equipping the operating forces with missiles has just begun. The next four or five years will see the Navy so equipped both offensively and defensively, to a considerable extent. The operating forces during this period will perform an important role in perfecting these weapons and techniques.

As noted earlier, one of our two basic missile requirements is air defense. When we remember Pearl Harbor, Coral Sea, Midway, Okinawa, etc., the vital role of Fleet air defense in naval operations in the past is obvious. Today, it is even more vital. Today's aircraft have already relegated the best antiaircraft guns to emergency last ditch weapons. Tomorrow's aircraft and offensive missiles are tending to make the gun not only obsolete, but useless for all-around air defense. Today's aircraft and missiles can carry atomic payloads. Adequate air defense of a task group under such conditions must imply all-around protection and complete destruction of attacking forces. This must be a basic goal.

It should be borne in mind that, by the very nature of naval operations, these missiles are not "defensive" in the normal sense of the word. They are not intended to defend a ship or position for the sake of defense. Rather, their purpose is to guarantee that our striking forces can go into areas which enemy air power may choose to dispute.

SINCE GUNS are being outstripped by aircraft, air defense missiles are essential now in limited, non-nuclear wars where an air threat exists. Granted, a naval task group can more readily accept the hazards of conventional bombs than it can nuclear weapons. However, the fact remains that the gun is today less effective, and, if enough conventional bombs are dropped, life at sea can become unpleasant and dangerous.

In support of air defense, two categories of missiles are being developed:

- ***Surface-to-Air*** (SAM)—These may be used from either a ship- or land-launching system.
- ***Air-to-Air*** (AAM)—These may be used from either carrier- or land-based aircraft.

In the surface-to-air category the Navy has three projects—*Terrier, Talos,* and *Tartar*—which are related, but are different in size and performance. These projects were begun primarily in support of the Fleet air defense requirements. The missiles, however, are adaptable to land-based use. A U. S. Marine Corps mobile *Terrier* system has been developed. The *Talos* land-based system has been under development for the Air Force for some time.

Terrier is launched with an auxiliary solid-rocket booster. After completing its job, the booster separates from the missile. The missile's solid-rocket sustainer is then ignited and maintains the missile at speed. *Terrier* is a beam-rider; the same radar which tracks the target also supplies the beam which the missile rides to that target.

The missile's "brain" determines the direction and distance of the missile from beam center and tells the control system to apply the aerodynamic corrections to

SOMEWHERE in the 'Med', *Cutlasses* armed with *Sparow* air-to-air missi

bring the missile back to beam center and on to the target.

The Operational Development Force has completed a service evaluation of *Terrier,* and the first *Terrier* ships have joined the Fleet. USS *Boston* (CAG 1) and *Canberra* (CAG 2) have been converted to guided missile ships through replacement of the after 8-inch turrets by two twin *Terrier* launchers, together with their magazines and fire control systems.

The fiscal year 1956 Shipbuilding and Conversion Program contained three new construction DLGs—5,300-ton frigates with one twin *Terrier* launcher each. Additional cruiser conversions and new DLGs are scheduled for later shipbuilding and conversion programs. However, it will be quite some time before every task group can boast an adequate quota of *Terrier* defenders.

THE NEXT OF OUR SAM missiles to be operational will be the *Talos. Talos* is a long-range missile and provides tremendous killing power in its role in Fleet air defense. It operates out into ranges at present reached only by interceptors, and is going to exert a big impact on Fleet operations.

The first *Talos* ship was in the fiscal year 1956 Shipbuilding and Conversion Program as a conversion of USS *Galveston* and should be operational in fiscal year 1958. One twin-launcher and missile magazine will be installed aft. Additional cruiser conversions are planned and the first nuclear-powered cruiser is slated for a full *Talos* capability.

The third missile of the team is the newest and smallest—the *Tartar,* which is a blood-brother of the improved *Terrier.* It offers savings in technical effort, money, and production facilities. *Tartar* is designed for use from ships as small as DDs and for secondary battery use from larger ships. The first application of this weapon will be to new destroyers in the fiscal year 1957 Shipbuilding and Conversion Program. The effectiveness of *Tartar,* in spite of its small size, will be greater than the first operational *Terrier.*

NEW MEMBER of the Navy's guided missile family, the snub-nosed *Sidewinder,* nestles under wing of a *Cougar.*

HOW ARE THESE missiles going to be used? The answer to this question brings up the problem of defense in depth—not protection of a point or a single ship. Task group air defense means detection, identification, classification, control, coordination, and destruction of targets in a large area. Air defense of a single task group today is a big problem—and involves a big area.

Where do the air-to-air missiles fit into this defense? These missiles, which are becoming the primary fighter aircraft armament, are also vital to Fleet air defense. As the inner defense is taken over by surface-to-air missiles, air-to-air missile-armed fighters will push the defense perimeters farther and farther outward—making life increasingly difficult for enemy bombers.

The air-to-air missile-armed interceptors increase the effectiveness of high altitude air defense, plug the gaps in low altitude defense which exist below radar horizons, and go out to meet enemy bombers who hope to launch air-to-surface guided missiles at considerable distance from the task group.

In actual practice, air-to-air missiles are capable of attacking in three dimensions. This is the "jump-up"

readied for launching from the flight deck of *USS Intrepid* (CV 11)

capability—the ability to hit targets at altitudes above or below the launchng aircraft.

With the capabilities of these weapons, there is little reason to question their adoption as primary armament for our fighters. These air-to-air missiles should give us an extremely effective Fleet air defense—real defense in depth.

THE PROJECTS mentioned so far relate to air defense. What about attack? There are two categories of missiles that meet the requirements:

- ***Air-to-Surface*** (ASM)—These may be used from either carrier- or land-based aircraft.
- ***Surface-to-Surface*** (SSM)—These may be used from either surface ships or submarines.

Before the guided missile era, an attack by aircraft could be accomplished with reasonable success and with relatively low losses. Today, however, it must be assumed that a potential enemy will be equipped with defensive guided missiles reasonably similar to our own. This is inclined to discourage bombing and torpedo-delivery techniques. The more powerful the enemy's defense, the greater the need for accurate attack from a distance. This is the role of the air-to-surface missile.

In the air-to-surface category, the Navy has several active weapon projects.

However, developments in this field rapidly approach a point of diminishing returns, particularly when restrictions on the size- and weight-carrying capacity of Navy attack aircraft are considered. A point is reached where it becomes more practical and economical to launch missiles from the surface, rather than carry them part of the distance by aircraft.

EVEN SUCH 'thinking machines' as guided missiles depend on manpower. Here crew jockeys *Sparrow* into wing launcher of *Cutlass* jet fighter.

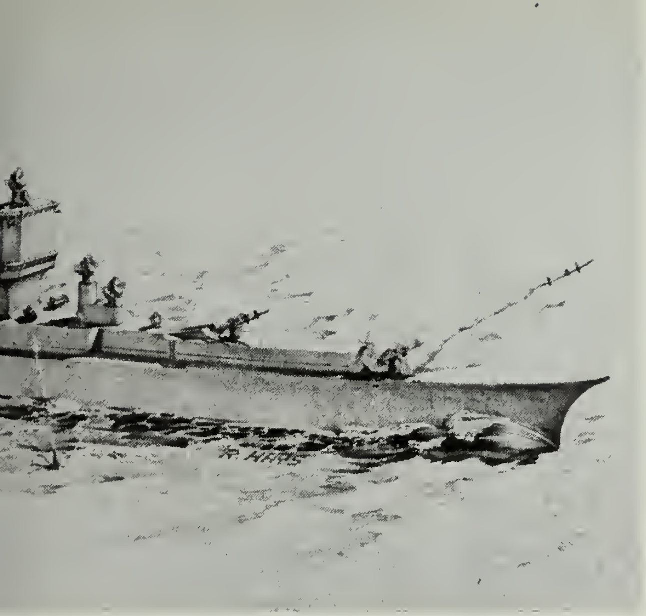
NAVY'S FIRST nuclear-powered guided missile cruiser, whic
the inevitable trend toward an atomic Navy. Shown in pict

This brings us to the surface-to-surface category. Here, the Navy can make a significant contribution. If another global conflict develops, first-choice targets of the enemy will presumably be our land-based retaliatory forces, both in the United States and overseas. Those forces which are established on foreign land bases may be more vulnerable to enemy surprise attack. Naval attack missile forces, however, because of their mobility, and their ability to cover the world's oceans, give us a tremendous offensive capability against the enemy, a capability that defies not only defense but attack.

THE SURFACE-TO-SURFACE MISSILE lends itself to use by either surface ship or submarine. It is use by the submarine, however, that may pay the greater dividends. With almost no supporting forces, individual guided missile submarines can operate in the face of strong defense in widely dispersed areas. In theory, at least, this appears an ideal way of keeping our potential enemy continually on the alert.

Before discussing the separate Navy surface-to-surface programs, several factors should be considered:

- Surface-to-surface missiles of intermediate or long range are capable of carrying nuclear warheads.
- Guided missiles carrying nuclear warheads are primarily deterrent or all-out war weapons.
- The very nature of a cold war calls for this type of weapon, ready for use now.
- The possibility of an indefinite cold war not only means that we



duled for 1957 shipbuilding program, will definitely continue n artist's conception of how the cruiser will appear when built.

cannot wait for a hypothetical ultimate weapon, but we must plan improvement, and replace our present weapons. In other words, there can be no guarantee against obsolesence.

Because of this, the Navy's philosophy in surface-to-surface missiles provides that:

- The present Navy operational attack missiles must be combined with the present aircraft attack capability to provide the offensive power we need today.
- A continuing program of improvements in, or replacement of, missiles has to be followed. If not, our present missiles will soon be obsolete.
- Each step in this program means higher speed, higher altitude, longer range, or increased immunity to countermeasures on the part of our missiles.

Our naval forces, because of their inherent mobility and flexibility, and because they need not depend on overseas bases, will assume a major role in offensive missile warfare.

In practice, Navy planning provides for these missiles:

Regulus I—may now be used by submarines, cruisers, and carriers. This missile is launched by auxiliary solid-rocket boosters or from carrier steam catapults, and can be fitted with an atomic payload. At the present time, many carriers, four cruisers, and two submarines are equipped to use *Regulus*. Additional submarines are under conversion or construction. Increased use of the *Regulus* by submarines may be expected (see page 24).

Regulus II—is planned as an operational successor to *Regulus I*. Its increased speed and altitude will make it a more effective weapon.

Polaris—is the Navy's IRBM (intermediate range ballistic missile) capable of being fired from submarines at land targets. It may also be fired from surface ships and is an important factor in future planning.

THIS DISCUSSION has been restricted to the Navy's guided missile efforts which may be expected to produce operational results within the next four to five years. Beyond this period there are broad areas of possibilities.

Some day the "ultimate weapon" may be produced. But until that day arrives and until the ultimate character of such a weapon is established, it must be remembered that war is not only a matter of technological superiority of weapons, but also of the strategy, tactics, and logistics related to their use. It cannot be assumed that, at any given future date, we will enjoy a technological superiority over our prospective enemy. In fact, it is not wise for us to make such an assumption.

But granting the enemy technological equality—or even slight technological superiority in some fields—we need be seriously concerned only if we are denied the freedom to attack from the high seas. To retain this freedom of action the Navy must remain strong. This calls for a Navy equipped with both offensive and defensive guided missiles.

(*A fuller discussion of this material may be found in the source from which the foregoing was extracted—"Combat Readiness"—a Navy Department classified publication.*—ED.)

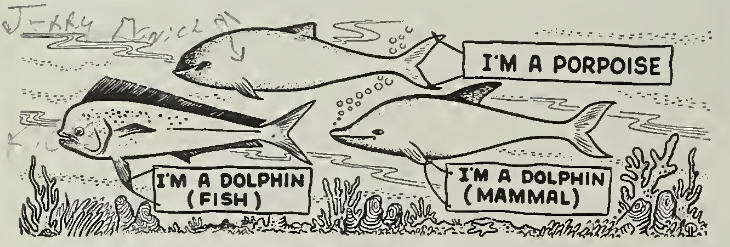
NOW A FAMILIAR sight, *surface-to-surface behemoth* of the Navy's guided missile program is being prepared for a graceful JATO launching.

TAFFRAIL TALK

REMEMBER THE STORY about the factory-worker who left the plant every night pushing a wheelbarrow full of straw? The guard at the gate was naturally suspicious so, time after time he searched the straw for company property, but he never managed to find any. Finally, his curiosity got the best of him and he stopped the worker and said, "Listen, I know you've been swiping something, and I'm sure it isn't straw. But, I'll promise not to report you if you'll only let me know what it is."

"Okay," confided the worker, "since you promise not to tell, I'll let you in on the secret—I've been taking wheelbarrows."

Well, back in December '56, we carried a one-page photo story on "Ice 'Bound' Animals," which we called "a photographic 'zoo' of frosty critters captured by alert Navy photogs as their ship made passage through Arctic or Antarctic waters." One of these "frosty critters"—a "porpoise"—was shown leaping in the air to accept a fish from a man in whites.



This started a flood of letters, and also a letter of Flood's —CWO R. J. Flood, USN, that is—who addressed his to the "Associate Editor, Nature-Faking Department." He pointed out that the animal shown does not frequent polar water, that it is a "bottle-nosed porpoise" residing in the outdoor aquarium at Marineland, Fla., and that the man feeding it is not a Navyman, but a civilian attendant dressed in a sailor suit.

Mr. Flood was right on all counts but one—technically the critter isn't a porpoise—it's a dolphin. Most of our other critics overlooked that mistake too.

So, hats off to the Nature-Faking Department. You did manage to heist one wheelbarrow anyway.

★ ★ ★

We have a note from our Editor-in-Charge-of-Credit-Where-Credit-Is-Due. He tells us that it might be well to credit the Bureau's chief photographer, Walt Seewald, and his associates, for their loyal and unflagging assistance to ALL HANDS Magazine. Mr. Seewald, it is, who processes pictures taken by staff members on field trips, who sets up and photographs *rush* jobs for our art department's illustrations and for photos for the magazine. One "for instance," for instance, is the back cover of this issue. Mr. Seewald did it as he has done so many other fine ones. The people in the picture, incidentally, are: CAPT J. A. Obermeyer, USN, CO of the naval unit at Massachusetts Institute of Technology, and ENS J. T. Tidwell, USNR, who portray the oath-taking at commissioning—the oath to defend the Constitution of the United States against all enemies, domestic or foreign—the oath of an officer of the U. S. Navy.

The All Hands Staff

The United States Navy

Guardian of Our Country

The United States Navy is responsible for maintaining control of the sea and is a ready force on watch at home and overseas, capable of strong action to preserve the peace or of instant offensive action to win in war.

It is upon the maintenance of this control that our country's glorious future depends. The United States Navy exists to make it so.

We Serve with Honor

Tradition, valor and victory are the Navy's heritage from the past. To these may be added dedication, discipline and vigilance as the watchwords of the present and future.

At home or on distant stations, we serve with pride, confident in the respect of our country, our shipmates, and our families.

Our responsibilities sober us; our adversities strengthen us.

Service to God and Country is our special privilege. We serve with honor.

The Future of the Navy

The Navy will always employ new weapons, new techniques and greater power to protect and defend the United States on the sea, under the sea, and in the air.

Now and in the future, control of the sea gives the United States her greatest advantage for the maintenance of peace and for victory in war. Mobility, surprise, dispersal and offensive power are the keynotes of the new Navy. The roots of the Navy lie in a strong belief in the future, in continued dedication to our tasks, and in reflection on our heritage from the past. Never have our opportunities and our responsibilities been greater.

ALL HANDS the Bureau of Naval Personnel Information Bulletin, with approval of the Bureau of the Budget on 23 June 1955, is published monthly by the Bureau of Naval Personnel for the information and interest of the naval service as a whole. Opinions expressed are not necessarily those of the Navy Department. Reference to regulations, orders and directives is for information only and does not by publication herein constitute authority for action. All original material may be reprinted as desired if proper credit is given ALL HANDS. Original articles of general interest may be forwarded to the Editor.

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The Bureau invites requests for additional copies as necessary to comply with the basic directive. This magazine is intended for all hands and commanding officers should take necessary steps to make it available accordingly.

The Bureau should be kept informed of changes in the number of copies required.

The Bureau should also be advised if the full number of copies is not received regularly.

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PERSONAL COPIES: This magazine is for sale by Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. 20 cents per copy; subscription price $2.25 a year, domestic (including FPO and APO addresses for overseas mail); $3.00, foreign. Remittances should be made direct to the Superintendent of Documents. Subscriptions are accepted for one year only.

• AT RIGHT: FLYING SNAKES — Guided Missileman Third Class C. C. Regg, USN, and F. D. Adair, AN, USN, push *Sidewinders* toward FJ-3 fighter of Squadron VF 143 at Naval Air Station Miramar, California. ➡

101

"I WILL SUPPORT AND DEFEND
THE CONSTITUTION OF THE UNITED STATES
AGAINST ALL ENEMIES, FOREIGN OR DOMESTIC"

ALL HANDS

THE BUREAU OF NAVAL PERSONNEL INFORMATION BULLETIN

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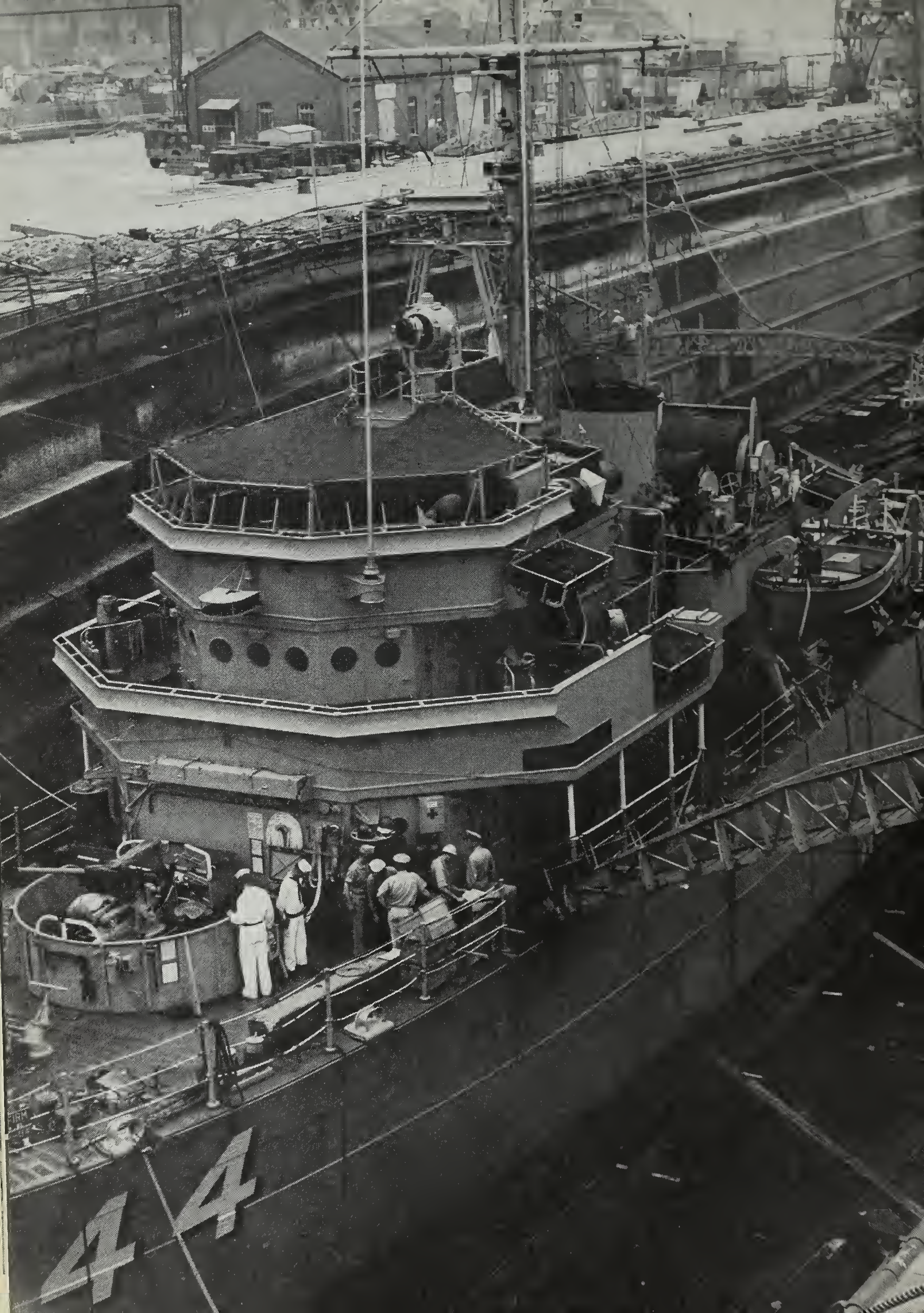
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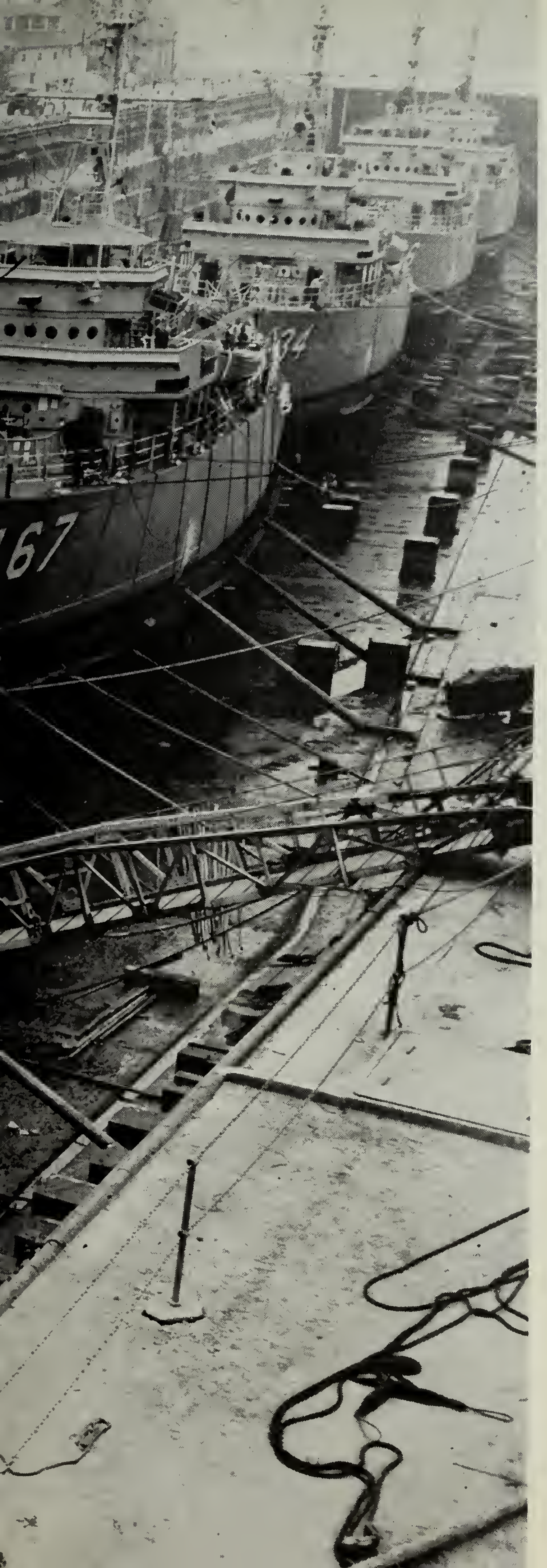

ALL HANDS

THE BUREAU OF NAVAL PERSONNEL INFORMATION BULLETIN

APRIL 1957 Nav-Pers-O NUMBER 483

VICE ADMIRAL JAMES L. HOLLOWAY, Jr., USN
The Chief of Naval Personnel

REAR ADMIRAL K. CRAIG, USN
The Deputy Chief of Naval Personnel

CAPTAIN O. D. FINNIGAN, Jr., USN
Assistant Chief for Morale Services

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Don Addor, **Layout**

- FRONT COVER: HATS OFF—Four bluejackets give ship-to-shore greeting from deck of USS *Bremerton* (CA 130). Left to Right are J. Shafer, FT2; J. Jefferies, BM2; F. Hardesty, BM2 and J. Jennings, SN.
- AT LEFT: FULL HOUSE—Division of minesweepers stands at rest in 1,031-foot drydock at Yakosuka, Japan. Five ships of MinDiv 94 are USS *Firm, Reaper, Embattle, Prime* and *Force.*
- CREDITS: All photographs published in ALL HANDS are official Department of Defense Photos unless otherwise designated.

TODAY'S FLEET centers on carriers. Here with Sixth Fleet cruisers, *USS Coral Sea* (CVA 43) makes high speed turn.

THIS IS YOUR NAV

WHAT is a "Fleet"?

Everybody talks about it: "The power of the Fleet. He's a Fleet sailor. Fleet shore duty." You read about it in newspapers, magazines and other periodicals. But what does everybody mean by "Fleet"?

The "fleet," according to one definition in Webster's New International Dictionary, is "a number of war vessels under a single chief command; also, the collective naval forces of a country."

Here's what it means so far as you and we are concerned. Let's start at the very top. The U. S. Fleet is the *Operating Forces* of the U. S. Navy. The Fleet, in both the Atlantic and Pacific, forms the naval power of the U. S. and it is the *sole* reason for the existence of the rest of the United States Navy.

The major Fleet commands in the U. S. Fleet are the Pacific Fleet, the Atlantic Fleet, and the Naval Forces, Eastern Atlantic and Mediterranean. The Pacific Fleet includes the Seventh Fleet, the First Task Fleet, the Naval Forces Western Pacific and sea frontiers and area support commands.

The Atlantic Fleet includes the Second Task Fleet, the Operational Development Force and sea frontiers and base support commands. The Operational Development Force tests and evaluates new weapons and equipment for service use.

For operating purposes, a Fleet may be divided into a number of *Task Commands.* Now here's a curve: For administrative purposes, such as transfer of enlisted men, the various types of ships that go into making a Fleet are grouped according to type. Carriers come under ComAirLant or ComAirPac; Destroyers are under ComCruDesPac or ComDesLant, and so on.

Take a ship under Commander Cruisers and Destroyers Pacific (ComCruDesPac) for example. When the ship from this type command joins the Seventh Fleet, in the Far East, it is under the *operational* control of ComSeventh Fleet. Yet that same ship and its crew remains under the *administrative* control of ComCruDesPac.

Because of the many varied jobs that may be assigned to a Fleet, it is often necessary to subdivide them into *Task Forces,* composed of several types of ships, depending upon the job the force is to perform. This task force may include aircraft carriers, battleships, cruisers, amphibious craft and auxiliary vessels such as tenders, oilers and supply ships.

When a Fleet is large enough and its duties are extensive enough to require division into many task forces, it is usual to form the forces into *Task Groups.* Task groups are of a more temporary nature than task forces and are usually dissolved after each particular assignment.

Task groups are assigned numbers according to the particular force of which they are a part. For example, Task Force 72 may have a task group assigned to a special mission and its designated number may be Task Group 72.3. Task groups may be further subdivided into task units and task elements. For example, take TU 72.3.1. Spelled out, this means Task Unit 1 of Task Group 3 of Task Force 2 of the Seventh Fleet.

Next in line come the *type commanders, divisions* and *squadrons.* Type commanders are more or less self-explanatory. Submarines will come under ComSubPac or ComSubLant. Cruisers are under ComCruDesPac or ComBatCruLant and Destroyers are under the control of ComDesLant or ComCruDesPac.

The very basic unit of vessels by

BEFORE WORLD WAR II emphasis was on BBs. Above, cruisers and battlewagons participate in 1939 Fleet maneuvers.

— THE U. S. FLEET

type is the division, and quite frequently two divisions are joined to form a squadron. The term "squadron" may also be applied to an organization of minor strength, whose commander operates under "detached" orders or directly under the instructions or orders of the Chief of Naval Operations.

There are also two other Fleets which you hear a lot about and which are also components of the operating forces. These are the Atlantic and Pacific Reserve Fleets. Known as the "Mothball Fleets," these ships provide a great reservoir of ships ready to be put into active service on short notice.

As you'll probably remember, more than one-fourth of these 2000 mothballed ships were recommissioned and saw service during the Korean conflict. The men who man these ships in the Reserve Fleet keep them in excellent material condition and each ship can be made ready for service on short notice.

Another Fleet in the U. S. Navy, which is also a part of the Operating Forces, is the Military Sea Transport Service (MSTS). This Fleet, which is the largest ocean shipping organization in the world, transports personnel and cargo of the Department of Defense.

At a recent count, MSTS had available a Fleet of some 265 ships, including escort aircraft carriers, cargo ships, passenger ships and tankers.

All are naval vessels except 49 which are commercial ships operating under various types of charter.

The Military Sea Transport Service, which celebrated its seventh anniversary last October, carried 860,315 passengers, over 15 million measurement tons of cargo and over 100 million barrels of petroleum products during fiscal 1956 alone.

There, basically, are the U. S. "Fleets" as they stand today. But let's get ahead of ourselves for a moment and see what the Fleet of the future will look like. As explained by Admiral Arleigh A. Burke, USN, Chief of Naval Operations, in a recent speech:

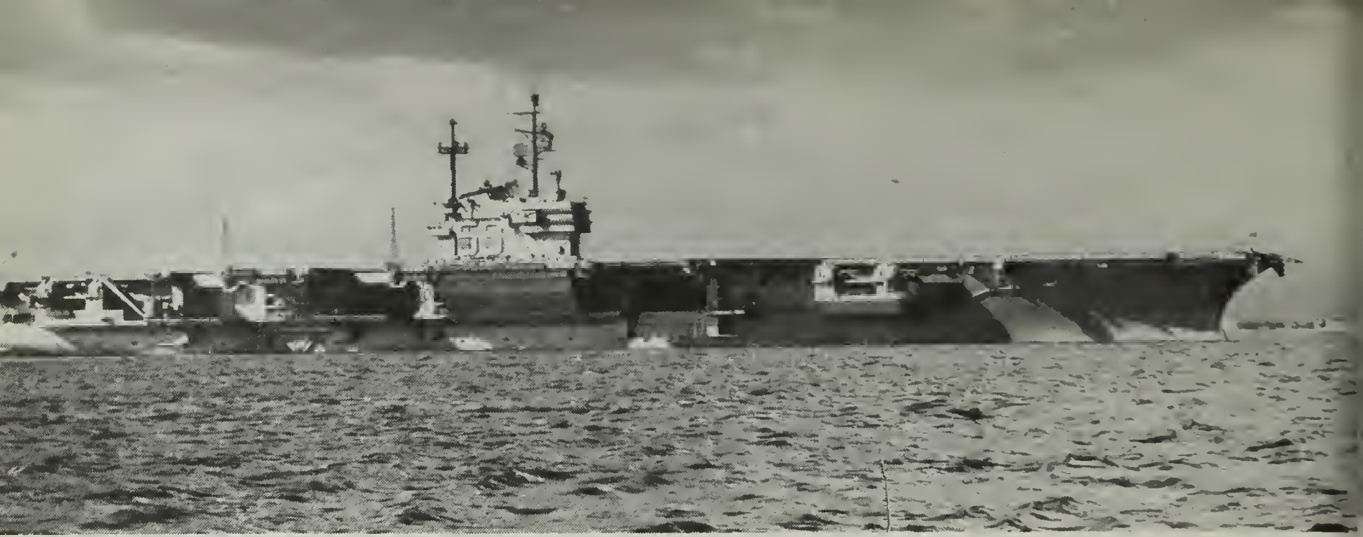
"During the 1960s the Navy will have nuclear-powered task forces. One such force will consist of two or more nuclear-powered aircraft carriers, four to six nuclear-powered cruisers and a limited number of nuclear-powered frigates.

"This nuclear-powered task force will be only a fraction of the size that served under Admiral Halsey and Admiral Spruance in the Pacific War. But in terms of *weapon* power and in terms of *striking* power, this task force of tomorrow will have strength many times multiplied of that of our present day forces.

"Aboard the mobile airbases of this task force will be a variety of naval aircraft, supersonic and long-ranged, of the most advanced type. Typical of these planes are ones such as the F8U *Crusader,* a 1000-miles-per-hour fighter aircraft, and the A3D *Skywarrior.*

"The attack bomber *Skywarrior* has a range of over 1500 miles out and 1500 miles back, which means it can hit virtually any target in the world. It can carry on each flight a bomb load having many thousands of times the destructive power of that carried by the heaviest carrier-based bomber of Warld War II.

"Also aboard the carriers, cruisers and destroyers will be a family of missiles which seem fantastic today — surface-to-air missiles, air-to-air missiles, air-to-surface missiles and surface-to-underwater missiles. And beneath the oceans will be our nuclear-powered submarines of all



FLEET OF TOMORROW is typified by *USS Forrestal* (CVA 59). Here she's anchored near *USS Wisconsin* (BB 64).

types — attack, hunter-killer, radar picket and missile."

That is the picture of the Fleet of tomorrow as envisioned by the Chief of Naval Operations.

But let's look at one of our present-day Fleets. One good example is the U. S. Seventh Fleet now operating in Far Eastern waters. Since the beginning of the Korean conflict, four more or less permanently organized task forces have been operating in the Far East. Naturally, operations as extensive as this require a variety of ships. This means that vessels and men from all type commands have been, or are, involved.

One of the hardest hitting groups of ships during the Korean fighting was Task Force 77. This force consisted of two or more large carriers, one battleship, cruisers and destroyers.

Aircraft assigned to the carriers did a two-fold job: (1) they blasted away at enemy supply lines and ammunition dumps. In the first 30 months of the Korean affair, carrier-based Navy and Marine Corps aircraft rained down more than 145,000 tons of bombs and untold number of rockets on enemy targets. (2) They provided close air support for front line Marines and soldiers. It's estimated that Navy and Marine aircraft flew about 40 per cent of all close air support sorties during these two and one half years.

Also during this period, Navy and Marine Corps aircraft flew more than a quarter of a million combat sorties against the enemy.

The other ships in Task Force 77 served as the carriers' antiaircraft and anti-submarine screens. Often, however, these ships were also called upon to leave the main force for special missions. One time it may have been to pick up a downed pilot; another time it may have been to bombard enemy positions in support of troops or as interdiction fire.

TRAINED AND READY—Men, weapons and ships of Fleets like U. S. Sixth help preserve the peace through their ability to fight in case of war.

Although an exact total of damage inflicted by the Seventh Fleet is difficult to make, Navy and Marine air combined with the surface Fleet units are credited with accounting for an estimated 121,000 enemy troop casualties (killed or wounded) and destroying 6008 railroad cars, 405 locomotives, 47,334 buildings, 3900 enemy vessels and 265 tanks. Navy surface units in coastal bombardment and gun strikes destroyed rail and highway bridges, broke up troop concentrations, harassed and interdicted transportation links.

Another segment of the Seventh Fleet which also operated during the Korean phase was Task Force 95, the *United Nations Blockade and Escort Force*. TF 95 usually counted more ships in its force than in any of the other three forces. It included escort aircraft carriers, destroyers, cruisers, destroyer escorts, frigates, minesweepers and tenders from all of the participating UN countries.

The third of the Seventh Fleet Task Forces was TF 79, the *Logistic Support Force*. The mission of this outfit is well defined by its title. The work of the unit enabled the ships of the other task forces to keep to a minimum the time spent away from the operating area. Everything from soup to nuts was supplied by the Logistic Support Force.

Probably the least known of the Seventh Fleet task forces has been the *Formosa Patrol*, or Task Force 72. This outfit's primary mission: to prevent the Chinese Communists on the mainland from mounting an assault on Nationalist Formosa.

These four task forces combine to form the U. S. Seventh Fleet, a part of the U. S. Pacific Fleet.

BASIC UNIT of ships by type is the division. Shown at right is a destroyer division of the Pacific Fleet.

The shape and organization of a Fleet need not, and cannot, be static, however. It is continually changing to meet the needs of the situation and of the country. For example, there was once a time when the U. S. had only a one-ocean Navy. This Fleet, vintage 1907, was the U. S. Atlantic Fleet, sometimes known as the Great White Fleet or U. S. Battle Fleet.

President Theodore Roosevelt decided to send that Fleet on a world cruise and chose Rear Admiral Robley D. "Fighting Bob" Evans to command it. Orders were delivered directly to Admiral Evans by the President himself and were never reduced to writing.

The U. S. Atlantic Fleet at that time consisted of 16 battlewagons which were equally divided into four divisions. Also included in the Fleet were four auxiliary ships. The Fleet, with Admiral Evans' flag flying in USS *Connecticut*, left Hampton Roads in December 1907 and sailed around South America, reaching San Francisco the following May.

The Fleet sailed from San Francisco two months later with Rear Admiral C. S. Sperry in command. After making ports of call in Hawaii, Japan, the Philippines, New Zealand and Australia, the Great White Fleet reached Suez, Egypt, in January 1909. There the Fleet received word of an earthquake in Sicily. The custom in the Navy then, as it is now, was to be ready and willing to help those in need. The voyage of the Fleet was momentarily halted to aid in rescue efforts until other U. S. ships arrived to relieve them.

U. S. EIGHTH FLEET saw lots of action off southern Europe in World War II. Here its DDs fan out in 1946 maneuvers.

When the Great White Fleet returned to the U. S. after more than a year's absence, it passed in review of President "Teddy" Roosevelt to end a dramatic trip that was a striking example to the world of U. S. naval power.

The waters in which the Great White Fleet sailed to aid the victims of the earthquake in Sicily are again very much in the news. And again, a mighty U. S. Fleet is on hand.

This powerful force is the U. S. Sixth Fleet, operating in the Mediterranean Sea.

Like other modern fast carrier task forces, the Sixth Fleet is formed around aircraft carriers. At present, the Sixth Fleet numbers over 60 U. S. warships of various types. Recent powerful additions to the Sixth Fleet include the carriers USS *Forrestal* and USS *Saratoga* and the world's first guided missile ship, USS *Boston* (CAG 1).

The striking arm of the carriers consists of over 250 attack bombers and jet fighters, all capable of carrying any type of airborne bomb or missile in use today. Also, there are heavy cruisers, destroyer squadrons and submarines. Also a part of this Fleet are the amphibious ships, loaded with reinforced Marine battalions complete with tanks and artillery.

As you can easily see, it takes a lot of little threads to make a rope and it takes many types of ships to make a Fleet. Granted, a division of four heavy cruisers, capable of dealing a lethal blow, can strike fear into the heart of any enemy. But in most cases, two destroyers, a small aircraft carrier and one heavy cruiser can hit even harder. And even more versatile and powerful is the composite of all these ships, DDs, CVAs, CVs, CAs, BBs, working in a task force.

Put them all together and you've got a Fleet.

—Rudy C. Garcia, JOC, USN.

PANAMA CANAL made 'one ocean Navy' a thing of the past. Here Atlantic Fleet ships *Dashiell* (DD 659) and *Gatling* (DD 671) go through.

USAF Afloat

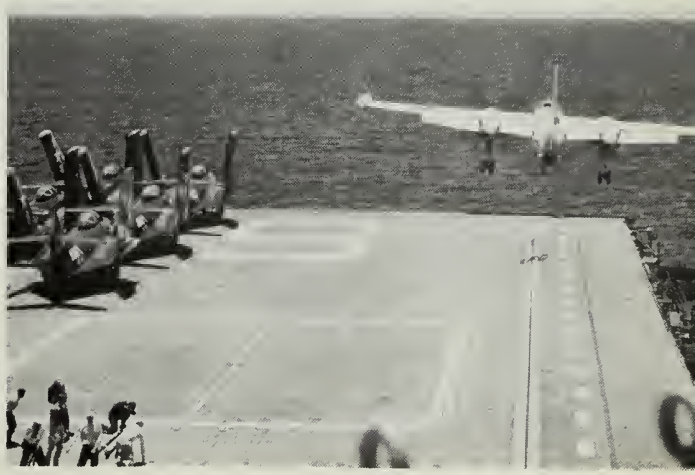
"So far as I'm concerned we landed in the water . . . some one just shoved the deck under us." These words came from an amazed Air Force colonel after a demonstration flight to and from the flight deck of uss *Essex* (CV 9).

He was one of a group of 20 USAF officers of Strategic Air Command, B-47 Wing, at Guam who were invited for a two-day cruise to learn a little about how Navy airmen operate. The group watched Navy pilots touch and go off the deck of their floating air strip in speedy *Cougar* and *Banshee* jet fighters. They were speechless as the large AJ-2s plopped down and rose again without even kicking in their additional jets.

As a whole, the land-based birdmen agreed that the team work and integration of operations allowing launchings from the bow while others came in on the angled deck astern gave them ideas which could be useful to any pilot.

When leaving they expressed their appreciation of how Navy pilots and airmen handled planes in such confined spaces, but none seemed eager to trade their mile-long runways for the seagoing roost. Here's a picture story of the Air Force on board uss *Essex.*

Top: Air Force officers watch touch-and-go demonstration by Navymen from the bridge on *Essex's* island. *Top right:* Flight operations of the two-engined AJ-2s to and from the confines of the carrier's deck amazed the pilots accustomed to mile-long runways. *Right:* Precision teamwork launches plane from catapult. *Lower right: Cougar* jet fighter safely hits crash barrier after losing arresting hook during demonstration for the Air Force birdmen.



SHIP AND

"A NEWSPAPER EDITOR should be a sulking hulk of a man with fire in his eyes, a cigar in his mouth and ink on his fingers. He's supposed to get rid of evil, conquer multitudes and deliver guidance to the meek. He builds an empire out of his newspaper and the words that come from his typewriter are the truth and should be taken as law—or that seems to be the common conception," according to the editor of uss *Boxer's* newly-established newspaper, the "Busy Bee."

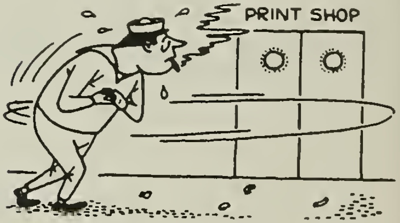
This seaman-editor continues: "We don't feel that we can live up to those 'standards' of our trade. First, the nearest thing we have to fire in our eyes is when the duty PPO gets us out of our rack too early in the morning and we're not in a good mood. The smoking lamp is out too often on the hangar deck for a cigar, and the rulers of the print shop won't let us get close enough to the presses even to smell the ink."

Although he claims he can't measure up to the mythical standards he lists, the writer of CVS 21's "Busy Bee" editorial has worked himself (or been pushed) into one of the Navy's more difficult, but most rewarding jobs—that of putting together one of the Navy's multitude of newspapers.

The editor's job, the reasons for and the rules governing his newspaper are like the papers themselves: so much a part of the local Navy scene we don't notice them until they're missing. Yet the Navy-wide group of ship and station publications form one of the world's largest newspaper chains. They are published under authority of **NavExos P-35** *(Rules, Regulations, Policies and Standards for the Control of Navy Publications and Printing)* which controls such items as cost, size, use of color and actual printing. The "rulebook" for this newspaper empire also includes several SecNav Instructions in the 5600 series, and Chapter 9, Section 7, **BuPers Manual,** which states the Navy's policy concerning ship and stations papers, including contents, distribution and the prohibition of all advertising except want ads. Further, only those ads may be published that are concerned with housing, rides to and from work, and lost-and-found items (unless you have special permission).

Chapter 8 of the Navy **Public Information Manual's** Appendix A has a few choice words on the "what's what" level for officer-advisers, editors and reporters. According to the *PubInfo Manual,* the principle behind publication of ship and station papers is the fact that an informed man is a better, more contented, and more effective man. To live up to that principle a newspaper should appeal to its readers by containing shipboard and other news and information of value to personnel, in addition to such items of entertainment as jokes, comic strips, cartoons, features and similar material.

This manual also states that a newspaper should never be used primarily as a means for the skipper (or anyone else) to lecture the men, since this would defeat the paper's primary purpose.



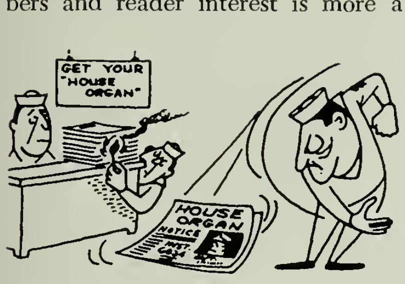
None of the official "rules," however, offers solutions to a couple of problems which *Boxer's* mildly-disturbed editor mentioned in his first editorial, problems which have haunted many Navy editors: the mostly-mechanical difficulties of production, for instance, and the human ones of reader appeal and the shortage of volunteers to fill staff billets.

From the standpoint of mechanical production, making do with

ASH!
TYPIST
CREATE
DO NOT FEED THE WRITERS ED.
ART

TATION PAPERS

whatever equipment is available is the fate of most shipboard editors; the lucky ones at shore installations frequently have a good Navy print shop available or either appropriated or non-appropriated funds for hiring the facilities of a good commercial printer. Snaring staff members and reader interest is more a matter of personal know-how and "skulduggery" on the part of whoever is assigned the job of turning out a regular "poop sheet." Still, even the most inexperienced of editors can find ways of beating these three problems.



Navy editors, as well as their counterparts in other services, have found that the **Armed Forces Press Service** can be a big help in turning out a creditable newspaper. AFPS offers such services as:

- A weekly **clipsheet** containing news, pictures, cartoons and other art which can be used to supplement local resources, regardless of whether your paper is printed by letterpress, mimeograph or photo-offset method.
- Upon request they will advise on the organization and operation of a newspaper, or (given copies of your ship's "rag") they will examine it thoroughly and return a detailed **critique** or report on what can be done to improve it.
- AFPS also offers the **Armed Forces Newspaper Editors' Guide** (NavPers 10293A), which may be ordered from your forms and publications supply distribution point listed in enclosure (1) to BuSandA Inst. 5604.1. Now being revised, this publication has superseded the *Navy Editors' Manual* (NavPers 10293A) which is out of print. The *Guide* is a handy *compilation* of the technical information needed to produce a readable paper without too much strain.

Navy editors can request these publications or services by writing to the Officer-in-Charge, Armed Forces Press, Radio and Television Service, Room 1425, Fisk Building, 250 W. 57th St., New York 19, N. Y., via the appropriate command channel and the Administrative Officer, Navy Department. (Material may also be submitted to AFPS for publication in its clip sheet.)

Papers which use a mimeograph machine as a "press" can obtain from AFPS pre-cut stencils of art work appearing in the weekly clip sheet, while office supply houses have available a number of "gadgets" and instruction books which tell how to do all sorts of tricks with stencils.

When anyone mentions rounding up enough willing hands to put out a newspaper most Navy editors could well answer, "Aye, there's the rub"—although on board a ship that's spending a fair amount of time at sea it isn't too difficult to find men who'll volunteer a part of their off-duty time. And lithographers, printers and photographers are usually willing to perform in their special fields (particularly if their names are added to the masthead). But writers and reporters, especially the amateurs, usually have to be cajoled from their hiding places.

Many of these same editors have found that a little checking among buddies in the various divisions will reveal at least a couple of guys who have worked on high school newspapers. It's been found, too, that chaplains and most ship's officers can —and will—do some writing for the struggling shipboard editor.

Digging through one of the editors' manuals and the training course manual for Journalist 3 & 2 (NavPers 10294) is considered a good way to pick up all sorts of information on publishing a paper and on "writing readable." An AFPS critique can be a big help in selecting material which has good reader interest, and many of the newspapers your ship receives in exchange for its own often serve as models and as sources for ideas.

Another service for the editor who's short of news and staff members is offered by the Internal Relations Branch of the Navy's Office of Information. This consists of informal memos and features dealing with current or upcoming events.

Stations, naturally, have good facilities for turning out a handsome newspaper. Staffwise, too, they seem to be well fixed, usually with a couple of professional civilians to guide unsteady hands.

One prime example of the station newspaper is "Dope Sheet," published by the Naval Air Station at Norfolk. Recently, its editor, JO3 John Timothy Smith, USN, in taking note of a number of awards made to the paper, pointed out that a newspaper "doesn't just happen out of thin air."

According to Tim, "a staff of 10 Navy newsmen work from five to

seven days a week gathering, sifting, evaluating, editing and typing news before each issue becomes a reality in the reader's hand." There are pictures to be taken, cropped and scaled to fit the desired space. Articles must be typed in column form on special composing machines; headlines, written to fit a particular space, are set by hand from a stock of printed pasteboard characters and pasted in their proper places.

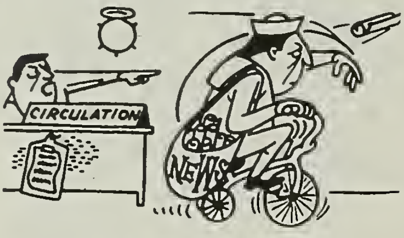
With the "dummies" of their usual eight pages pasted up "Dope Sheet" staff must make a final check to insure that captions are under the right pictures, that headlines are over the right stories and that several thousand words are spelled the way Webster does it. Then the dummies and properly-scaled photographs are turned over to a commercial printer to be reproduced, first as metal printing plates, and finally as reader-bound copies of "Dope Sheet."

Distribution of the finished issue accomplishes the mission which NAS Norfolk's paper shares with all Navy newspapers: "To serve as a positive factor in promoting the efficiency, welfare and contentment of personnel."

Another Stateside station paper which has done yeoman service for thousands of "boot" sailors is the 33-year-old "Hoist," issued by the Naval Training Center, San Diego. Established in 1923, six months after the training center opened for business, the "Hoist" first appeared as a four-page 8½ - by - 11 - inch publication, edited by the Center's chaplain and staffed by volunteers.

The paper grew up along with the training center, however, and is now a tabloid-size, slick paper, eight-page publication, complete with photographs and artwork. Staffed by personnel of the center's Public Information Department and commercially printed, the "Hoist" has become one of the most widely known station publications in the Navy.

In the seagoing Navy, the larger ships with their superior printing facilities can easily turn out better-looking (but not necessarily more readable) newspapers than can the editor whose production staff is armed with little more than a mimeograph machine or a beat-up early model office duplicator. One example is the eight-page "Jerseyman" of USS *New Jersey* (BB 62) whose editorial staff consists of an officer adviser, one JO3 and one seaman. "Jerseyman" production staff consists of one PH1, three LI3s and two seamen (one each in the photo lab and print shop). BB 62, however, does have a number of men who can be counted on as reporters, staff poets and general editorial handymen.



USS *Shangri-La* (CVA 38), with an editor and four reporters, plus a 14-man print shop staff and a couple of photographers, has little trouble turning out a weekly 2500 copies of the four-page "News Horizon"—plus an additional 2-to-10,000 copies of a souvenir edition whenever the carrier holds "open house."

Hardly a prize winner from the standpoint of looks, but one of the more readable of shipboard papers is the "*Moale* Monitor" put together bi-monthly for the men of USS *Moale* (DD 693). And (shades of the staff personnel problem!) this MM's staff consists of one chief hospitalman, one personnel man third class, and two seamen putting out the paper.

In one recent mimeographed six-page issue of double-column, to-the-point prose, "*Moale* Monitor" amateur staff found room for:

- A full page of sports, including coverage of a softball game in which *Moale's* men downed USS *Sperry* (AS 12) by a score of 11 to 8 "on a hot, humid day in Iskenderun, Turkey;" a softball game in which *Moale* and *Sperry* pooled their manpower in an unsuccessful (1-0) attempt to best Israel's national champions; and the unsuccessful attempt of another *Moale-Sperry* task force to better the score racked up by the basketball team the Israelis had intended for the Olympics.

- A full report on a sightseeing tour originating in Haifa and offering *Moale*men a chance to follow "The Footsteps of the Master;" a report on the destroyer's visit to Haifa and the series of "open houses" held there, and an editorial commentary on the progress Israelis are making in transforming their barren land.
- A "Dear Ma" letter highlighting the events of a three-day visit to Tobruk, in addition to space for a short note to the home-folk.

To round out their morale builder, *Moale's* newsmen included a meet-your-shipmate feature, a paragraph which could pass for a "chaplain's column," a couple of notes on movies, a paragraph recording new additions to the families of *Moale* sailors, a pair of jokes and a slogan.

Typical of their jokes: "You've heard of chameleons changing color, but have you ever heard of an editor turning into a drug store?" And that wasn't the funniest one either.

—Barney Baugh, JO1, USN.

Movie-Makers, USN

ON-THE-SPOT coverage of history in the making, records on film of Navy jobs, and the men and equipment that perform them—that's the idea behind the training program of Navy cameramen. These men learn their techniques and know-how from a nucleus of cinematographic instructors at the Motion Picture (C) School located at NAS Pensacola. The school, administered by the Naval Air Technical Training Unit, has classes convening every 14 weeks.

All types of motion picture cameras of both 16-mm. and 35-mm. are utilized, including sound, ultra-high speed and underwater cameras. Students are quickly introduced to the ins-and-outs of camera work, developing and processing, printing, editing, and directing. Script-writing and special effects offer unusual students an opportunity to display their originality.

During training, prospective cameramen are sent on location to cover news events under the watchful eye of instructors.

Top left: Training enables men to shoot sound training films. *Top right:* Navy cameraman in the field catches full effect of blast set off by demolition crew. *Right:* Final adjustments are made before photographing the action of shutter at nearly 800 frames-per-second. *Lower right:* Perfect synchronization of the "ear" and "eye" of these machines is important. *Lower left:* an instructor demonstrates the production of sound film.

THIS IS SUMMER? Planes at Antarctic air strip are engulfed by snow at beginning of summer season.

Life at Navy's Southernmost Dut

When an element of Operation Deepfreeze, Navy's Task Force 43, was about to leave for Antarctica, ALL HANDS got in touch with the powers that be and asked for a story written on the spot. "Give us the informal, penguin's-eye view," we asked. "But stick to the cold facts. No romance."

And so this is the story. It was written, as you will note, in the cold, cold, cold. The first draft was written on thin slabs of ice with melted snow as ink. It is an impressionistic record of the work done by the Navymen who wintered over at McMurdo Sound. Written by Chief Journalist J. E. Oglesby, USN, *it was "cleared at the source" by CTF-43's PIO.*

With the copy from Chief Oglesby was a memo to the effect that another of our field correspondents (if you write to us from the field, i.e., any place but Washington, you're a field correspondent), Joe Sigler, J02, is working on a follow-up story on ice.

THE BIG PUSH was on. Planes were due from New Zealand in two and one half months. Eight feet of snow covered the only possible landing strip and one—repeat one—tractor was available to move the 10 million-plus cubic feet of snow and ice covering the 225 by 6000-foot runway.

That's how the situation stood at the Navy's southernmost airbase, McMurdo Sound, Antarctica, at the height of the Antarctic winter night.

It was dark. The sun had set 21 April and wouldn't rise again until 21 August.

It was cold. The thermometer stood at 70° below zero Fahrenheit and the bay was whipped by strong winds.

Heavily dressed Navymen working under floodlights could stand only 20 minutes' exposure at a time. They wore jury-rigged surgical masks to filter and pre-heat their

NAVYMEN WORKED in 70 below temperatures clearing 10 million cubic feet of snow to make Williams Air Facility.

PETROLEUM and gasoline are delivered by icebreaker. Fuel line is laid across ice to storage tanks.

tation

own breath but the masks iced up within an hour.

Nevertheless, after some 100,000 man-hours of work by the 93-man wintering-over party the strip was ready, complete with GCA.

Even before the big airstrip push, life wasn't too soft. You had to be at least a senior first class petty officer to draw messcook duty. Senior messcook was a lieutenant commander and, during the airstrip episode, junior messcook was a PO1. They weren't interested in rank or prestige. They competed for the post in the galley of Raymond Spiers, CS1, because, for one reason, he had up-ended the old maxim of "Them as eats, works" to make it read "Them as works, eats." Then, too, it was relatively warm in the galley.

Landing in late December 1955, all the Fleet rates, airmen and construction men of Mobile Construction Battalion Special worked against time to erect their houses before the last ship left on 9 March. Then, after the ships were gone, they had to complete the buildings' interiors before sundown 21 April.

Building 34 houses in the lava ash of Mount Erebus is not child's play even in the Antarctic summertime. Working from tents, standing in outdoor chow lines for meals and forever braced against the cold, the men of Williams AirOpFac knew no relief. (The facility is named for Seabee driver Dick Williams who perished when his 35-ton tractor plunged through bay ice.)

After the ships left and the build-

WEASEL-DRAWN sled train carries sections of fuel line to icebreaker. *Below:* Navymen working in ice and snow connect line's last link.

ON-THE-SPOT maintenance was important in keeping equipment working. Here, C. S. Lynch, CE1, USN, repairs generator on GC approach unit.

ings were completed, the 93 men began to package 500 tons of equipment and supplies for airdrop at the South Pole. Each package had to be weighed, strapped, packed and ready to parachute to the 10,000-foot plateau.

Each hardship, each extra workload seemed to kindle a stronger unit spirit among the 93 men commanded by pilot LCDR Dave Canham who seemed to be everywhere at once.

Take the chapel for instance. The men wanted one. The chaplain wanted one. But the base diagram didn't include one nor did the quantity of building materials allow for it.

So they scrounged. And they worked. Father John (John Condit, ChC) and his 92 parishioners kept a roving eye open wherever they walked, especially around the trash piles and the supply dump.

A nut here, a bolt there, a piece of dunnage here and a scrap of sheet metal there—the chapel came into substance. A naive carpenter forgot to lock his plywood supply cabinet and an altar was assured.

Construction men assembled the hull after finishing their regular 12-hour work shift.

The hull assembled, they put it up. The wind moved it several yards. Next day 40 men mule-hauled it back in place for more additions. That night the wind moved it again. Next day they took it back. Finally it was complete enough to anchor down. Then a spire and a steeple gave it the majesty of reverence.

TIME OUT for fun—Chaplain (LT) John C. Condit, USN, leads a cool version of a Hill Billy band while Deepfreeze personnel relax at McMurdo Sound.

Looking at the chapel now, against the background of Observation Hill where a cross honors the memory of CAPT Robert Falcon Scott, a newcomer cannot appreciate the hardship that went into its building.

A white picket fence outside and an altar inside give it an air of permanence. It even has a bell, courtesy of one of the YOGs frozen in the bay.

Saturday nights gave respite to the grueling work routine. Hendrik "Dutch" Dolleman, 51-year-old Air Force Master Sergeant with considerable hours in both the Arctic and the Antarctic, calls the Saturday night happy hours "a chance to settle old gripes and start new ones." Dutch came on Deepfreeze to train and care for the dogs held in readiness for airdrop to pilots or trail party members downed in treacherous regions. His sage advice was often sought during the winter night.

Paydays were not too frequent but William T. Hess, SKC, managed to conduct an object lesson in finance that would leave Wall Street spellbound. The paymaster was 400 miles away at Little America Five so he issued Agent Cashier Hess $9,255 to pay the crew at McMurdo. With that initial stake, Hess paid out $23,404 from 29 February to 2 November and ended up with a balance of $1,449.61.

How? He re-used money collected by the Ship's Store and by the officers' mess caterer.

Health problems were surprisingly few. Doctor Isaac Taylor, LCDR, recorded a few cases of frostbite and no snow blindness during the severe weather. When the ships left he prescribed for the few colds and other respiratory diseases. After that, the climate was so cold these diseases didn't recur.

The human machine stood the test much better than the inanimate machinery. Chief mechanic Charles M. "Slats" Slaton forgot what sleep was like during the airstrip project. The big tractor had to be kept going at all costs, else the Pole landing and base building couldn't take place. So Slaton and his mechanics kept it

SPECIAL COVER is used to heat engine of R4D *Skymaster* on frozen runway of Williams Air Facility.

together by skill, tricks and prayers.

Somebody said of Norman Nason, SW1, "His guys have welded everything — from broken hearts to the crack of dawn."

The airstrip was number one concern at all times but there was apprehension at first on how well the two YOGs would fare as the temperature dropped. To augment the fuel supply, they had been loaded and towed from the States. Their anchors were then planted 200 feet high in the permafrost of a hillside. Each ship was checked daily for hull ruptures but both withstood the strain.

When Navy planes arrived 16 October they saw a perfect airstrip —or more appropriately, a perfect landing ditch on the 14-foot thick bay ice. First to land was the Task Force Commander, who came roaring in by R5D. Next day the remaining planes of Air Development Squadron Six arrived.

Within days giant C-124 *Globemasters* began to land with tons of priority air cargo and additional personnel. Some planes weighed out at 190,000 pounds gross on take-off from New Zealand, 2250 miles northward, for the fly-in.

With the sudden population swell the wintering-over group at McMurdo faced a paradox—how to accommodate 267 people in space designed for 93. The mess hall went on shifts; VX-6 maintenance crews set up their own accommodations on the bay ice; everybody moved his bunk a little closer to his shipmate to make room for another.

Finally, before Janesway Huts could be assembled, they even put cots up in the chapel. One new arrival said, "I never slept holier. But I felt awful guilty every time I cussed."

Nor was all the Yankee ingenuity shown by the wintering-over group. One Navy airman just aboard developed a severe toothache and had to have an extraction.

Next morning the doctor came to his hut to check his health. Expecting to find a badly swollen jaw, the doctor was amazed to find the youngster's face almost normal.

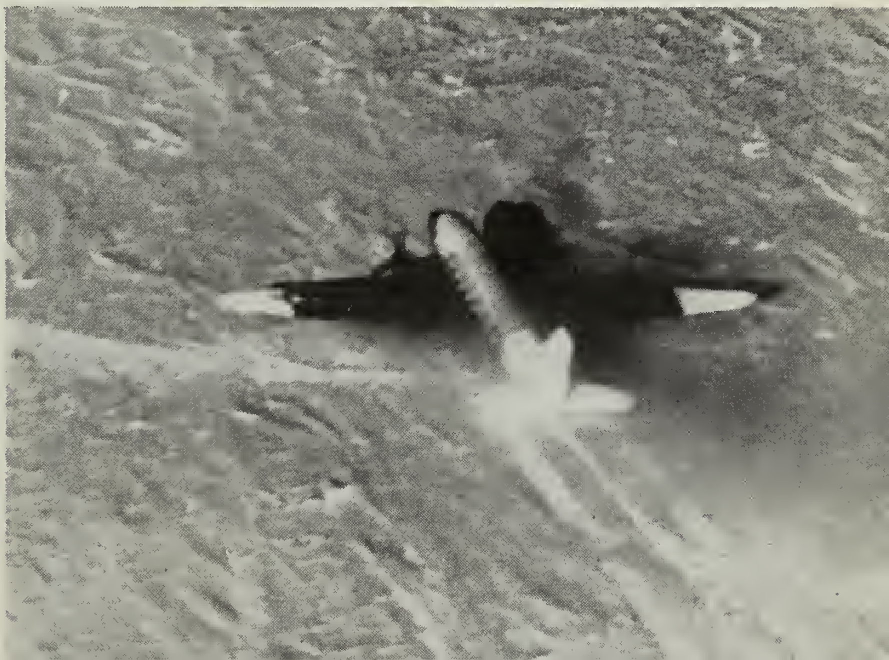
"Did it give you trouble?"

"Yes sir, for a while."

"Why didn't you come to sick bay or send for me?"

"It was too far. Besides, I found an icepack," he said, sheepishly drawing an ice-cold can of beer from his sleeping bag and holding it up.

Living accommodations settled, a



HISTORY IN THE MAKING—First plane to land at South Pole skis in on barren ice. *Above:* RADM Dufek, Deepfreeze Commander, plants flag at pole.

YOGS FROZEN in ice of McMurdo Sound were towed in to serve as winter filling stations during the construction of Williams Air Facility.

fast air pace began. Navy planes flew the advance trail party to Little America for scouting a safe trail into Marie Byrd Land. Then Navy and Air Force planes explored the drop area at the South Pole as well as the Beardmore Glacier area where an auxiliary air base was needed to support the pole flights.

A camp was established on the Liv Glacier near Mount Duncan on 28 October at an ideal location 500 miles south of McMurdo Sound and 303 miles north of the Pole. Thus planes could take off from McMurdo with less than a maximum load, stop at Beardmore station to refuel, then proceed to the Pole with a greater margin of safety.

Then on 31 October the Task Force Commander made Antarctic history by landing on the South Pole. The flight was made in R4D Bureau Number 12418 named "Que Sera Sera" (Whatever will be will be). The plane's crew included LCDR Conrad S. Shinn, pilot; CAPT William M. Hawkes, co-pilot; LT John R. Swadener, navigator; John P. Strider, AD2, plane captain; William A. Cumbie, Jr., AT2, radioman; and Rear Admiral Dufek, Commander Task Force 43, and Captain Douglas L. Cordiner, Commanding Officer of AirDevRon Six, observers.

Captain Cordiner's mission was to learn the conditions under which his pilots would have to operate when landing construction men to build the Pole base. Admiral Dufek wanted to see that, plus the conditions under which his Seabees would work.

The flight represented the culmination of more than two years of planning and 27 years of Navy Antactic experience since the late RADM Richard E. Byrd first flew over the pole in 1929.

The seven who first landed on the 10,000-foot polar plateau have been assured their rightful place in history.

But in retrospect one thinks with admiration of the spadework at McMurdo Sound that made the pole landing possible.

When the next frontier—the moon—is conquered, there will be another 93 men like those at McMurdo who'll stick out their necks, freeze their knuckles, endure an Antarctic night and keep their backs to the wheel to make the lunar landing a success.

—J. E. Oglesby, JOC, USN,
Flag, CTF-43.

NAVY'S ANTARCTIC base has come a long way since first recon party landed a little over a year ago.

H OF A TABLE — Members of TACRon 22 hold practice session around special table at Little Creek amphib base.

The Card Table That Paid Off

Amphibious operations have become a classic of warfare since their widespread success in World War II.

Characterized by the closest cooperation between land, sea and air forces, amphib warfare today is familiar to all Navymen, either through actual participation, orientation classes or personal accounts of shipmates.

There is one important phase in the amphibious assault, however, which is not too well known. That is the job of the Navies TACRon, in the proper use and coordination of supporting aircraft.

Here's a report on the typical TACRon, its history, and how it operates.

Since the early days of World War II, the control of all aircraft and air defense units involved in an amphibious operation has been placed in the hands of what is now known as "Navy Tactical Air Control Squadrons."

The origin of this type of unit goes back to the days of Guadalcanal during World War II. It was in that campaign that surface-controlled attack planes were employed for the first time in assaulting enemy installations and fortifications. The results obtained were highly successful, both in the destruction of enemy installations and in support of our troops.

The first actual "Air Support Control Team" operated from a card table aboard USS *Pennsylvania* (BB 38) during the Attu operation in May 1943. It consisted of three officers and one enlisted man. Fifty sorties were flown against the enemy in that operation.

As the Pacific island-hopping campaign continued, training of personnel in the techniques of close air support was accelerated and more "Air Support Control Units" were commissioned. By the time the war came to a close, there were

TACRON UNITS operate from AGCs, coordinating armed forces air support against enemy positions. Here, *USS Eldorado* (AGC 11) directs action in Korea.

AIR ACTION against enemy must be coordinated. Planes of Navy, Marine Corps and Air Force in joint amphib operations use TACRon information.

13 ship-based teams and five landing force teams in the Pacific Theater.

In 1946, the number of Air Support Control Units was reduced to three units and their designation changed to "Tactical Air Control Squadrons."

Typical of the TACRons in today's Navy is Tactical Air Control Squadron 11, temporarily based at NAS North Island, San Diego. Its skipper is a naval aviator, as are approximately half of the officers attached to the squadron. There are 15 Naval officers attached to the squadron in addition to one aviator each from the Marine Corps, Air Force and one Army officer. There are 37 enlisted men in the squadron.

TACRon 11 was originally commissioned as TACRon Three in 1950 and actively participated in amphibious operations during the Korean War. The squadron now has three overseas tours behind it and recently sent a detachment to WestPac early this year.

What are the jobs of a TACRon? Under the direction of the Tactical Air Control Group commander, the squadron is the link between the amphibious forces and Navy Air, Marine Air, Air Force, and air services of our allies. The squadron plans, directs and controls all aircraft involved with the assault.

The liaison necessary in controlling aircraft is accomplished through the officers of the TACRon. The air section of the over-all operation order is compiled and written by the squadron and the actual direction of aircraft is controlled by TACRon personnel from an amphibious flagship.

In a recent Pacific Fleet training exercise, the officers and men of TACRon 11 carried out their job of controlling the aircraft from specially equipped spaces aboard USS *Estes* (AGC 12) and USS *Eldorado* (AGC 11). In an amphibious exercise or operation, the work of operating personnel of the TACRon is centered around an area known as an "H" table.

Radio network controllers are spaced at remote radio outlets on both sides of this H-shaped table while a coordinator is positioned in the center. Air traffic, air direction, air request, and air observation are examples of the circuits controlled.

Normally, the aviators assigned to a TACRon do not pilot aircraft engaged in amphibious exercises. Their knowledge of the capabilities and limitations of aircraft and pilots, and their familiarity with radio telephone procedure and pilot jargon make them vital members of the controlling team aboard ship.

Another TACRon job is the training of aircraft squadrons and air groups in the techniques of close air support. All officers attached are thoroughly trained in the procedures and tasks required in the coordination of artillery, guided missiles, naval gunfire and antiaircraft gunfire, in the controlling of numerous associated radio networks, processing requests for air support, and controlling aircraft in their assaults.

The enlisted men in TACRons are mostly radiomen and electronics technicians. They have vitally important jobs as net controllers, status board keepers, teletype operators and mechanical trouble shooters.

Today, there are five TACRons in commission. TACRons 11 and 12 are units of the Pacific Fleet Amphibious Force and are under Tactical Air Control Group One. TACRons 21, 22 and 23 are part of the Atlantic Fleet Amphibious Force under Tactical Air Control Group Two.

Although TACRons have been reduced in number since World War II, their importance in amphibious operations has grown tremendously. It's been a long time and much progress has been made since that card table was set up on *Pennsy* in '43. And that table has paid off.

TABLE is the nerve center of air operations sending in planes for missions such as close ground support.

LETTERS TO THE EDITOR

This section is open to unofficial communications from within the naval service on matters of general interest. However, it is not intended to conflict in any way with Navy Regulations regarding the forwarding of official mail through channels, nor is it to substitute for the policy of obtaining information from local commands in all possible instances. Do not send postage or return envelopes. Sign full name and address. Address letter to: Editor, ALL HANDS, Room 1809, Bureau of Naval Personnel, Navy Dept., Washington, D. C.

Rate Change for Temporary Officer

Sir: I have been selected for appointment to warrant officer. In the event that I am appointed, can I have my permanent rate changed to chief petty officer? If so, what's the procedure?—F. D. G., BM1, usn.

- *Yes. Once you receive your appointment to warrant rank, your commanding officer can change your rate to BMCA in accordance with BuPers Inst. 1430.7B, which governs advancement of enlisted personnel.*—Ed.

When Does Travel Time Start?

Sir: I hate to be the one to inform you that the answer you gave in a letter to the editor concerning Travel Time (August 1956 issue) is in error. You stated ". . . the day of departure is considered a day of duty, so that the man's travel time would not begin until that midnight. Thus, if he departed at 1200 on 1 June, he would not have to report to his new duty station until 2400 on the following day (2 June)."

BuPers Manual, Art. C-5317(3)(a) states "Travel time shall be counted in whole days, periods of 24 hours, based on time of departure as shown by endorsement on orders, fractional parts of 24 hours being counted as whole days." Thus in the case stated in the letter, the man should have reported by 1200 2 June instead of 2400 2 June, since the man was not granted any leave (delay in reporting) or proceed time, making it necessary for the man to report at 1200 the following day. Whereas, say the man was granted 10 days' delay in reporting, four days' proceed time and one day travel time, the man would not have had to report until 2400 16 June, because of leave and proceed time being a factor. In the case stated the man was granted only one day travel time, making it necessary for the man to report at 1200 the following day or 1200 2 June, which is a period of 24 hours. Thus in this case the man's first day does not count as a day of duty, but as stated in Art. C-5317(3)(a), the travel time starts at 1200 1 June, based on the time of departure, whereas if there had been a delay in reporting (leave) and proceed time involved, it would have been counted as a day of duty.—R. M. T., YN2, usn.

- *You can stop hating yourself. According to the reference you used, you are correct, the only gimmick being that your reference is applicable only when air transportation is involved, and is not the correct reference in this case.*

Although the man in question is actually in a travel status beginning at 1200 on 1 June, the calendar day of 1 June is computed as a day of duty irrespective of the actual hour of detachment. The man is allowed one full calendar day of travel time which begins at 2400 1 June and ends at 2400 2 June and is computed in accordance with "BuPers Manual," Article C-5318(3), omitting the leave and proceed time.—Ed.

Navy Fencers

Sir: I enjoyed reading your Navy sports roundup in the December issue of All Hands. To complete the picture, however, it should be noted that the Third Naval District fielded its own fencing team this year and came up with a handful of medals at the National Fencing Championships. A team consisting of LTJG Bob Parmacek, usnr, LTJG Richard Berry, usnr, LTJG Lawrence Lazovick, usn, and Ensign Roger Jones, usnr, won second place in the National Epee team event and then went on the same day to place third in the National Three-Weapon team championship. By way of historical note, the prizes for the latter event are memorial medals, to commemorate the greatest all-around fencer the United States has ever seen: Lieutenant George Calnan, usn.

The Navy also had its individual stars in fencing during the past year. Sewall Shurtz, YN3, usn, took third place in the National Individual Epee Championships (he won this event in 1954) and then went on to win the National Foil crown. He was named to the Olympic Fencing Team in both weapons. LTJG William Andre, usnr, in addition to making the Olympic Modern Pentathlon Team, also won his way to a berth on the Fencing Team, a most remarkable achievement. He accomplished this by tying for first place in the National Individual Epee title. Despite a game effort, he lost the playoff for first place to the defending champion and had to be content with second spot.

I think you'll agree that the Navy's fencers made themselves felt this year.—R. F. J., LTJG, usnr.

- *That they did, and a good bit of sports news it is. However, for the sake of clarity, it should be pointed out that these fencers were assigned to the Third Naval District to take advantage of the excellent coaching and training facilities prior to competing in the Olympic Fencing Trials, which were also held in New York City.*

As stated before, any items of Navy-wide interest are welcome. Why not submit news about the men and activities of your unit to All Hands?—Ed.

'LOVE ME TENDER' could be song of 6th Fleet's *USS Pompon (SSR 627), Moale* (DD 693), *Charles S. Sperry* (DD 697) getting repairs from *Cascade* (AD 16).

Ship Reunions

News of reunions of ships and organizations will be carried in this column from time to time. In planning a reunion, best results will be obtained by notifying the Editor, ALL HANDS Magazine, Room 1809, Bureau of Naval Personnel, Navy Department, Washington 25, D. C., four months in advance.

- USS *Barton* (DD 722)—A reunion will be held during May in Washington, D. C. For information concerning reservations and program, write to F. M. Shore, Jr., 9915 Dickens Avenue, Bethesda 14, Md.
- USS *Chicago* WW I Assn.—The 37th annual reunion of former crew members is scheduled on 13 April, in Philadelphia, Pa. For more details write Paul A. Kline, 17 W. Park Avenue, Oaklyn, N. J.
- USS *Delta* (AR 9)—A reunion is tentatively scheduled for 9, 10 and 11 August, in Philadelphia, Pa. Contact Charles J. Reed, 304 Derwyn Road, Drexel Hill, Pa., for more information.
- *Eighth Beach Battalion*—The second reunion will be held in Montreat, N. C., on 9-12 May. For additional information, write to Clifford L. Legerton, 263 King Street, Charleston, S. C.
- *Commanding Officers, Destroyer Escorts*, WW II—The eighth annual DE Skippers' reunion and dinner will be held at the New York Yacht Club, New York, on 25 April. For information contact H. V. B. Richard, 50 Broadway, New York 4, N. Y.
- USS *Oklahoma* (BB 37)—A reunion will be held in the Sylvania Hotel, Philadelphia, Pa., on 4 and 5 May. Further information may be obtained from E. H. Lutz, 673 Lindley Road, Glenside, Pa.
- USS *Tulagi* (CVE 72)—A reunion of the officers will be held on 4-7 July at the Hotel Del Coronado, Coronado, Calif. For details contact F. A. Holden, Medical Arts Building, Baltimore 1, Md.
- USS *Warren* (APA 53) — The fifth annual reunion will be held at the President Hotel, Atlantic City, N. J., on 10-12 May. For more information write to William J. Peters, 28-4 Harris Place, Paterson 4, N. J.
- USS *Brough* (DD 148)—All former shipmates interested in holding a reunion with time and place to be decided by mutual consent, should contact C. D. King, 328 Colorado Building, 2400 West Colorado Avenue, Colorado Springs, Colo.
- USS *Brooklyn* (CL 40)—Former crew members interested in holding a reunion, with time and place to be decided, write Alford W. Wells, 1316 Oakpark Ave., Norfolk, Va.
- USS *LST 579*—All crew members who served on board from the time of commissioning until September 1945, who are interested in having a reunion should contact Sam S. McKeel, 223 N. Dotger Ave., Charlotte, N. C.
- *24th Naval Construction Battalion*—Former crew members interested in holding a summer reunion should write to G. G. Fitzpatrick, 16 West 10th St., New York 11, N. Y.
- USS *Thomas Stone* (AP 59)—The first reunion of all shipmates will be held in Richmond, Va., 18 May 1957. For additional information write to CAPT. E. J. Speer, USNR, 1115 South Spruce St., Southport, Conn.
- USS *Hayter* (DE 212, APD 80)—A reunion is scheduled for all crew members on 4 May at the Warwick Hotel, New York City. For further details, write to Kenneth J. McGuire, 863 Kinsella Street, Bronx 62, N. Y.
- *WAVES*—Waves will celebrate their 15th birthday with a reunion to be held in Boston, Mass., on 26, 27 and 28 July. All present and former Waves are invited to attend. For additional information, contact the National Waves Reunion Committee 1957, 495 Summer Street, Boston 10, Mass.
- *52nd Seabees*—The 10th annual reunion is scheduled for 1, 2 and 3 August, at Hot Springs National Park, Ark. Details may be obtained from Herbert Wardlaw, Box 128, Altheimer, Ark.
- *Fifth Marine Division Association* — The eighth annual reunion will be held at the Statler Hotel, Buffalo, N. Y., on 28, 29 and 30 June. All members of the Division and attached units are invited. For additional information, write to the Fifth Marine Division Association, Headquarters, Marine Corps, Washington 25, D. C.
- *U. S. Naval Cargo Handling Battalion No. 1*—All former members who are interested in holding a reunion next September may contact George J. Clark, YNTC, USNR, Pleasant Avenue, RFD 1, Scarborough, Me.

Who's In Charge?

SIR: It is my understanding that in the absence of the Commanding Officer and Executive Officer, the assigned Command Duty Officer (or Officer of the Deck) is in full charge of the ship.

In a recent discussion, Article 1373 of *Navy Regulations* was quoted to the effect that the senior line officer, eligible for command at sea, is in charge of the ship.

However, according to Article 1008, every person on board who is subject to the orders of the Commanding Officer, except the Executive Officer and those specified in Article 1009, shall be subordinate to the Officer of the Deck.

This seems to bring Articles 1008 and 1373 into conflict. Could you provide the correct interpretation of this situation?—M. H. S., ENS, USN.

• *There's really no conflict between the two articles. The Officer of the Deck does not, by reason of being on watch, succeed to the office of Commanding Officer of the ship. Nor does the Command Duty Officer.*

It is true that both possess certain command attributes during the period of the watch, but that is because they are the direct representatives of the Commanding Officer, whether he be the one regularly assigned or one who has temporarily succeeded to command by operation of Article 1373, "U. S. Navy Regulations, 1948."

It is the officer specified in that article who is in charge of the ship, whether or not he is on watch.—ED.

Instructors at NROTC Colleges

SIR: I would like to be assigned instructor duty at one of the many colleges where there is a billet for a chief storekeeper. Is it possible to specify in my request "Instructor duty at a college only," or must I take my chances and accept duty at a Class "A" School if no billets are available at a college? And where can I get a list of colleges having a billet for SKC?—G. F. D., Sr., SKC, USN.

• *ALL NROTC units have an allowance for SK1/SKC and you may designate the particular unit you desire. These units are listed in the Catalog of Naval Shore Activities.*—ED.

Well, It Was Back in The Twenties

SIR: In the Book Supplement of November 1956 issue of ALL HANDS, you stated: "On 12 June 1921 she (*Mississippi*) was engaged in firing advance practice 'B,' together with *Tennessee* and *Idaho* off San Pedro, Calif."

At that time I was one of several signalmen on watch on the signal bridge of *Missy* and seem to remember the date as 12 Jun 1923 and not June 1921. —D. A. G., BMC, USN (Ret).

• *When you and other readers called our attention to the passage, we checked our source and found we had lost three years in the transcription. The official ship's history states that the incident occurred 12 Jun 1924.*—ED.

ACI School

SIR: Does the Navy have a school for the study of criminology?—M. L. H., CS3, USN.

• *No, there is no Navy school as such, but the Army conducts an eight-week course in Advanced Criminal Investigation. Navymen who meet the entrance requirements may request quotas through Chief of Naval Personnel.*—ED.

Retired Grade

Sir: I was a Chief Warrant Officer from February 1944 until October 1946, and hold a Certificate of Satisfactory Service. At what warrant grade will I be retired upon completion of 30 years' service?—R. W. W., DTC, usn.

• *Upon retirement, you will be advanced on the retired list to the highest grade and rank in which you served satisfactorily (as determined by the Secretary of the Navy), in accordance with the provisions of Title 10, United States Code, Section 6151, as amended. Effective from the date of retirement, you will be entitled to retired pay based on the rank determined. (Your record indicates that the highest rank attained by you was Chief Warrant Officer, W-2.)* —Ed.

Authority to Issue Orders

Sir: Without any previous authority is it possible for a commanding officer to issue temporary additional duty orders to officers and enlisted men of his command, provided no travel or expense to the government is involved in the execution of the orders?
—G. J. K., LTJG, usn.

• *It seems unusual that orders of any type would be necessary if no travel is involved.*

However, a commanding officer is not authorized to issue orders of any type unless he has been granted authority by the Chief of Naval Personnel or the respective Administration Commander who has been designated as an order writing activity.

Your reference for issuance of authorization orders when there is no cost to the government is Article C-5307(1) of "BuPers Manual" and BuPers Inst. 1321.2B, paragraph 5a.—Ed.

Enlisted Precedence

Sir: Not so many years ago the Navy was quite specific as to seniority among the various rates. Men in charge of drafts, working parties, etc., were determined by who was senior in rating and rate.

Today, few sailors know who is senior to whom. Boatswain's mates lead the list, quartermasters follow — after that all is confusion. Would you please enlighten me and, I am sure, many other men of the Navy?—R. K. M., RMC, usn.

• *Change #20 to the "BuPers Manual," clarified Article C-2102 in this manner:*

In non-military matters, enlisted personnel take precedence among themselves according to pay grade held and the date of advancement to that pay grade. In cases of the same date of advancement, precedence is according to the rating held, as indicated in the table which is part of the "Manual's" Article C-2102(3). For personnel in pay grade E-7 (CPOA or CPO) the date of precedence is that of advancement to chief petty officer, acting appointment.

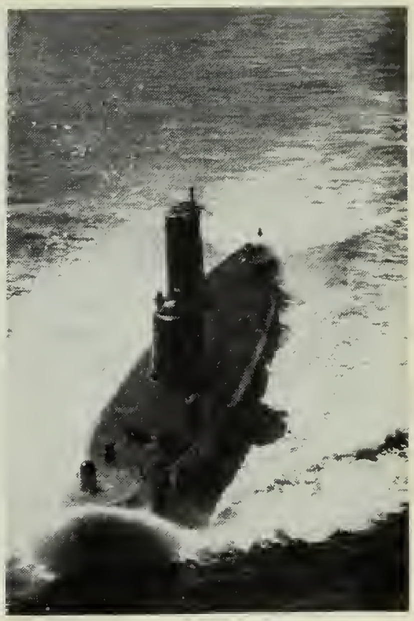
Seniority for assumption of military authority of general service enlisted rates and ratings continues to be in the order listed in Article C-2102(3). In military matters, dates of appointment have no bearing unless two of same rating and rate are involved.—Ed.

Canceling Extension of Enlistment

Sir: I have been transferred from the duty for which I officially agreed to extend my present enlistment. Since I have not yet begun to serve on my extended time, I would like to cancel the extension. What is the best way of going about this?—D. J. H., AO1, usn.

• *Agreements to extend enlistments are cancelled under the provisions of Article C-1407, "BuPers Manual" which refers to extensions of enlistments. Requests for cancellation of an agreement to extend your enlistment can be granted when, through no fault of your own, you failed to receive full benefits for which the agreement was made. You should forward your request to the Chief of Naval Personnel for decision, together with a full report of the circumstances and the commanding officer's recommendation. Each request is judged on its individual merit.*

Be sure to do this before your extension becomes effective. After that time it will be impossible to cancel it.—Ed.



SEA HUNTER—*USS Bashaw* (SSK 241) converted to hunter-killer mission cuts white wake through waters topside.

. . . how to send ALL HANDS to the folks at home

Superintendent of Documents
Government Printing Office
Washington 25, D.C.

ENCLOSED find $2.25 for a subscription to ALL HANDS magazine, the Bureau of Naval Personnel Information Bulletin, to be mailed to the following address for one year

NAME...

ADDRESS..

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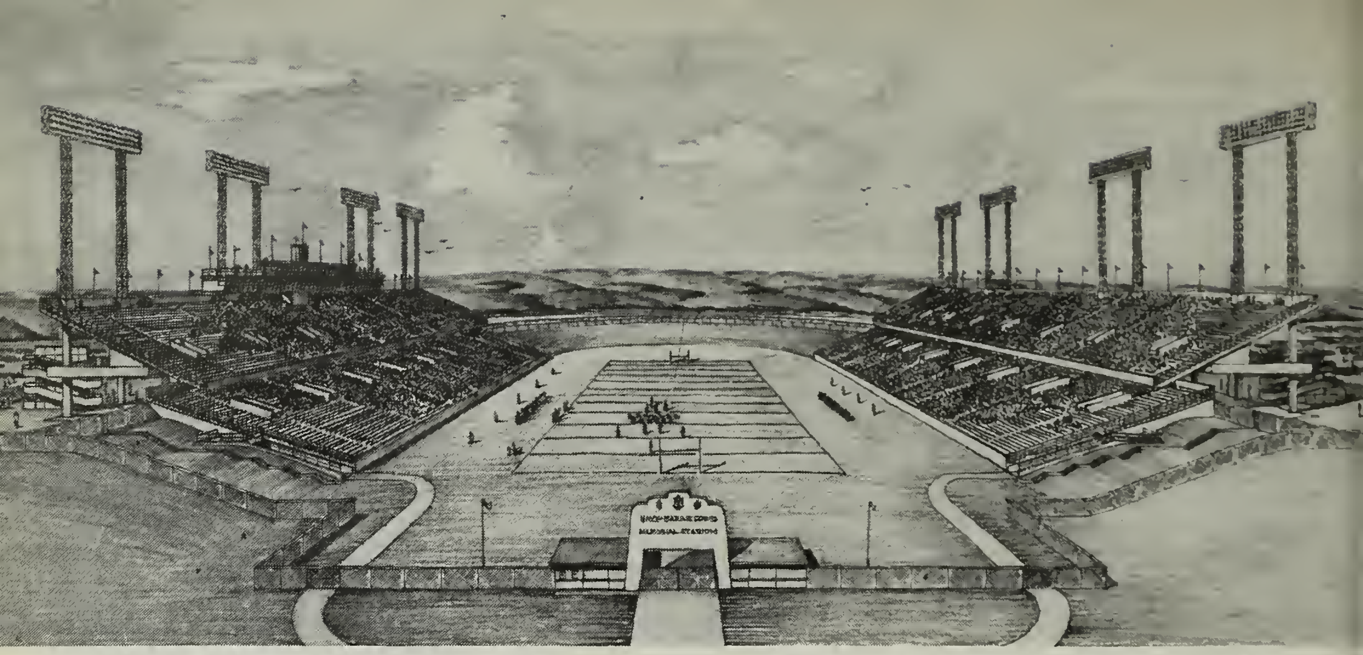
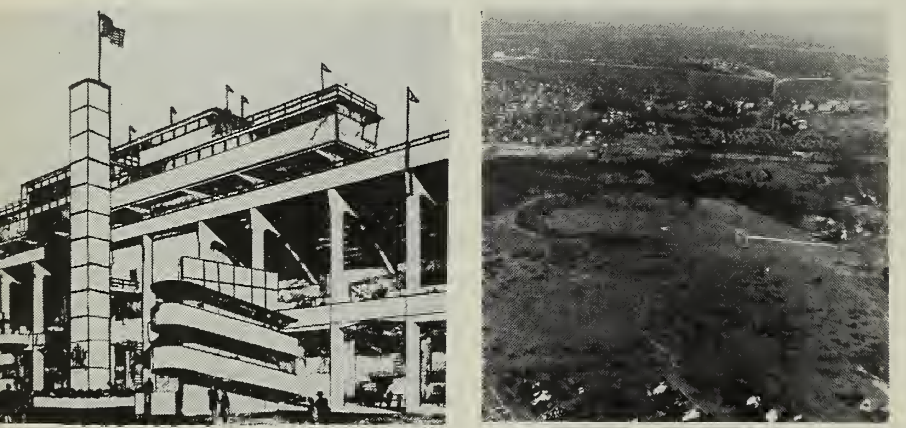
(For prompt filling of orders, please mail this blank and remittance direct to the Government Printing Office. Make checks or money orders payable to the Superintendent of Documents.)



NAVY-MARINE CORPS Memorial Stadium shown in drawing will furnish the site for many Navy sports events.



ENTRANCE to Memorial Stadium is depicted in sketch. *Right:* Horseshoe impression marks site of new stadium. Academy can be seen at top right.

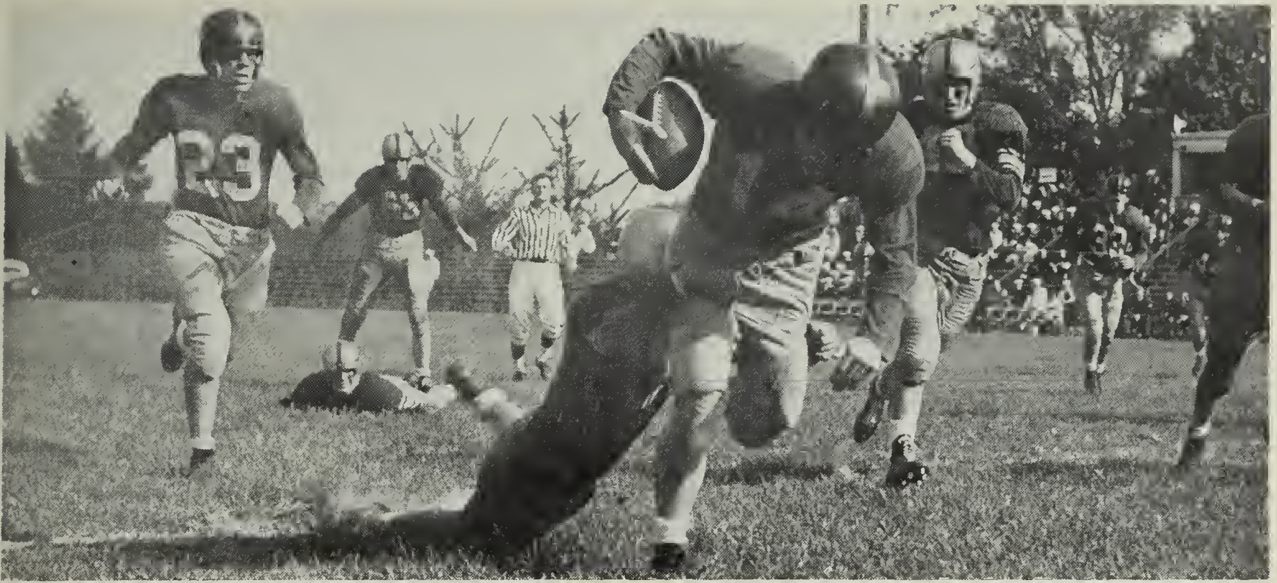
Navy-Marin

"*THIS STADIUM is dedicated to those who have served and will serve — upholders of the traditions and renown of the Navy and Marine Corps of the United States. May it be a perpetual reminder of the Navy and Marine Corps as organizations of men trained to work hard and to play hard; in war, defenders of our freedom; in peace, molders of our youth.*"

THAT'S THE INSCRIPTION to be placed above the main gate of the new 31,000-seat Navy-Marine Corps Memorial Stadium at the Naval Academy, Annapolis, Md. It will be a lasting memorial to all Navymen and Marines serving today as well as those who have served earlier. An individual plaque will be dedicated to each of the Navy's and Marine Corps' deceased Medal of Honor winners.

Although not everyone can hold the Medal of Honor, it is possible to have your name or the name of your ship or organization listed among the illustrious heroes of the Navy and Marine Corps—names such as Butch O'Hare, Cassin Young, John Cromwell, John Power and Richard O'Kane.

Here's how it will work: The stadium is being built—at an estimated cost of $3,100,000 — by private funds, since the Navy does not consider it appropriate to request funds from Congress for this purpose. More than $1,000,000 have been



IN ADDITION to the Naval Academy sports the Memorial Stadium will be available for use in All-Navy events.

Stadium Underway with Aid of Fleet

accumulated over the years by the Naval Academy Athletic Association toward the Memorial Stadium Fund.

The Association, which has assumed responsibility for construction of the stadium, has announced that all Navy and Marine Corps units which make a contribution will have their names engraved on a memorial tablet. Each unit or organization that contributes more than $1000 will have its donation recorded on a separate plaque. For $100, the name of anyone — living or deceased — who has ever served in the Navy or Marine Corps will be suitably inscribed on one of the chairs. Special memorials will be considered by a Memorial Board.

The stadium is intended for use by the entire Navy. It will be available for events without rental charges for All—Navy and interservice athletic contests and games as well as for civic organizations and secondary schools in the vicinity.

The need has been apparent for years. The present Thompson Stadium, seating 15,000, was built in 1912 and for years has been condemned, patched and repaired season by season. As may be seen by the illustration, the new field house and gymnasium and the expanding Bancroft Hall have just about squeezed Thompson Stadium out of the picture.

Present plans call for construction of a stadium seating 31,000 spectators, with room for expansion to 70,000, plus parking space for some 8200 autos. It will be available for field games such as football, lacrosse, soccer, and for other field events. In the words of RADM W. R. Smedberg III, USN, it "will be the only joint Navy-Marine Corps memorial in the country, dedicated to all those who have served and are serving in the naval service today."

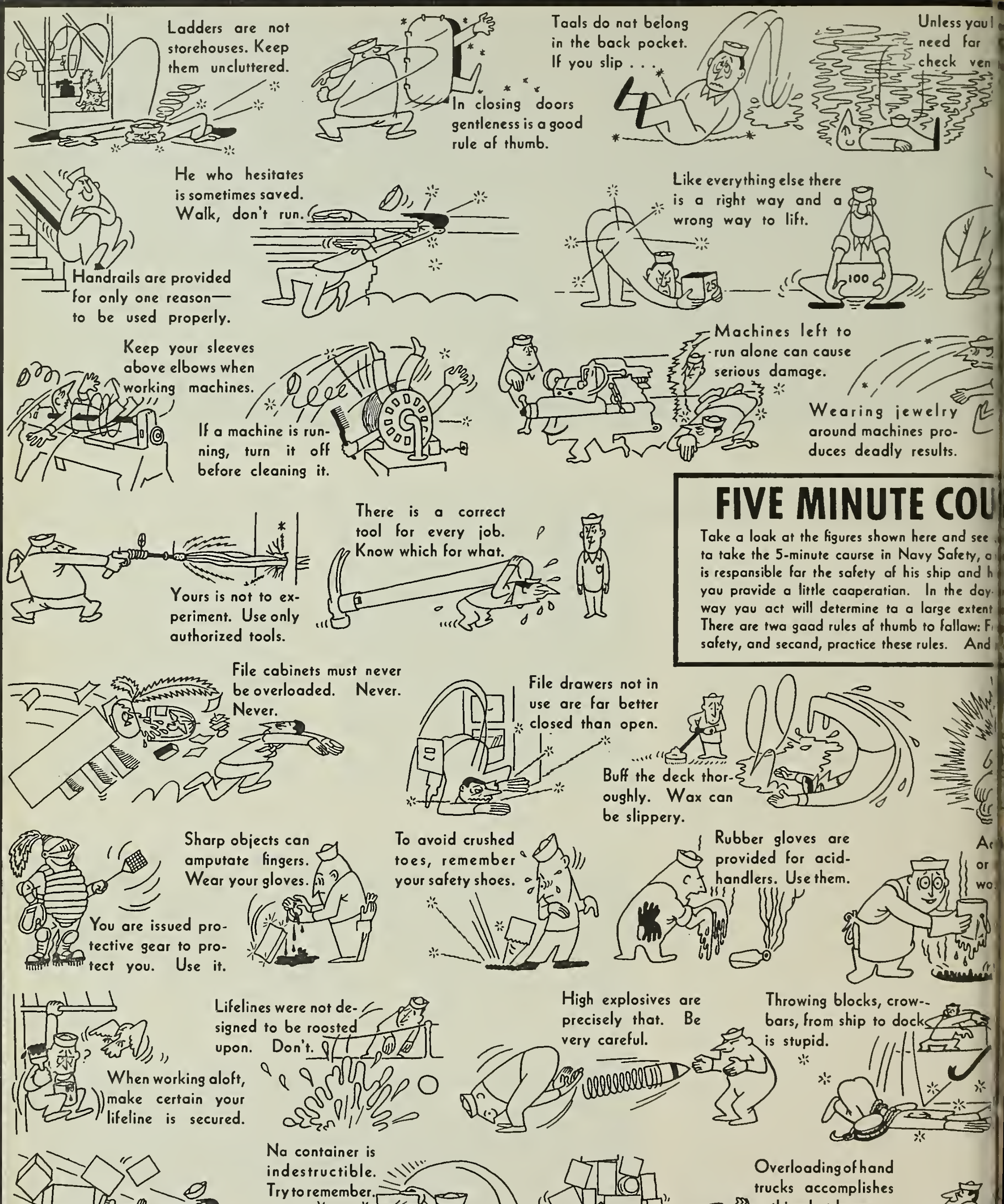
Contributions have already been received from past, present and future Navymen. USS *Canberra* (CAG2) has forwarded a check for $500. Traditional adversaries and Hawaiian area champions, the SubPac All-Stars and the All-Hawaii Marines fought a tight 88-77 basketball contest (favor of SubPac) and the $2646.90 proceeds went to the Memorial Fund.

Each day's mail in the office of CAPT E. B. Fluckey, USN, director of the project and himself a holder of the Medal of Honor and four-time winner of the Navy Cross (he was CO of the submarine USS *Barb* during five of its war patrols in WW II), brings in notes such as these: "I am enclosing $1.00. Must say I wish it was $100. My regrets that I can't send more." J. P. B., CWT, USN (Ret.); "I am sending check for $2.00 hoping it will help in building the stadium. I would send more but I am living on my retirement pay."—H. F., BMGC, USN (Ret.).

And then there was the one from a future Navyman: "Dear Sir: I am sending you $1.00 for the new stadium. I am 11 years old and earned the money shoveling snow. I hope someday to play in the stadium."—John Will, Batavia, N. Y.

Contributions for the Academy stadium fund may be addressed to: Memorial Stadium, Annapolis, Md.

OLD THOMPSON Stadium, long outdated, is giving way to new construction.



Ladders are not storehouses. Keep them uncluttered.

In closing doors gentleness is a good rule of thumb.

Tools do not belong in the back pocket. If you slip . . .

Unless you
need for
check ven

He who hesitates is sometimes saved. Walk, don't run.

Handrails are provided for only one reason—to be used properly.

Like everything else there is a right way and a wrong way to lift.

Keep your sleeves above elbows when working machines.

If a machine is running, turn it off before cleaning it.

Machines left to run alone can cause serious damage.

Wearing jewelry around machines produces deadly results.

FIVE MINUTE COU

Take a look at the figures shown here and see
to take the 5-minute course in Navy Safety, a
is responsible for the safety of his ship and h
you provide a little cooperation. In the day-
way you act will determine to a large extent
There are two good rules of thumb to follow: F
safety, and second, practice these rules. And

Yours is not to experiment. Use only authorized tools.

There is a correct tool for every job. Know which for what.

File cabinets must never be overloaded. Never. Never.

File drawers not in use are far better closed than open.

Buff the deck thoroughly. Wax can be slippery.

You are issued protective gear to protect you. Use it.

Sharp objects can amputate fingers. Wear your gloves.

To avoid crushed toes, remember your safety shoes.

Rubber gloves are provided for acid-handlers. Use them.

Ac
or
wo

When working aloft, make certain your lifeline is secured.

Lifelines were not designed to be roosted upon. Don't.

High explosives are precisely that. Be very careful.

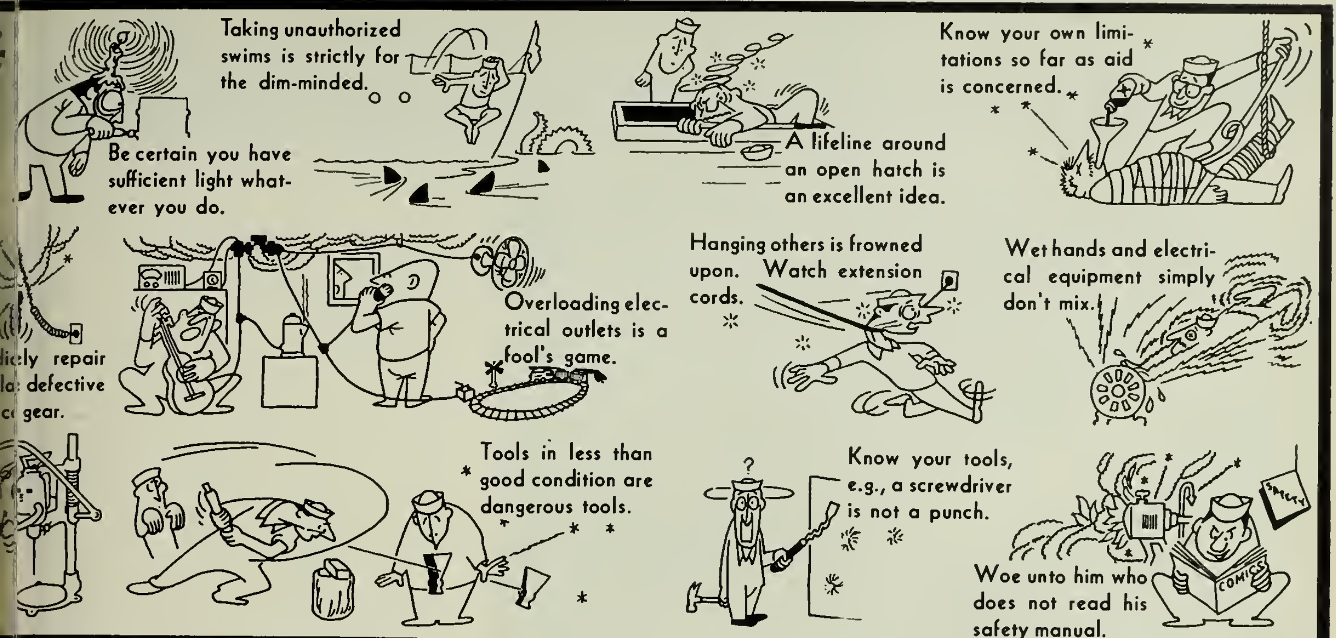
Throwing blocks, crow-bars, from ship to dock is stupid.

Keep a hand truck below you or be ready to scurry.

No container is indestructible. Try to remember.

Overloading of hand trucks accomplishes nothing but harm.

Prepared by ALL HANDS Magazine



Be certain you have sufficient light whatever you do.

Taking unauthorized swims is strictly for the dim-minded.

A lifeline around an open hatch is an excellent idea.

Know your own limitations so far as aid is concerned.

iely repair
la defective
c gear.

Overloading electrical outlets is a fool's game.

Hanging others is frowned upon. Watch extension cords.

Wet hands and electrical equipment simply don't mix.

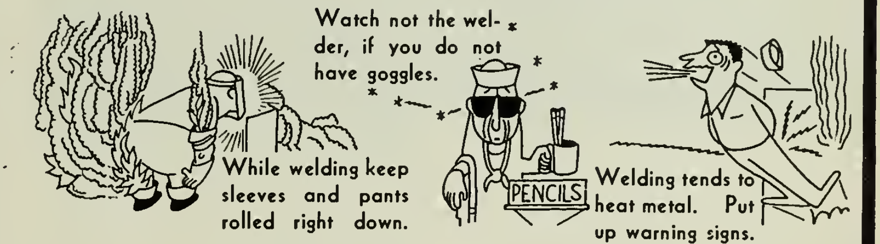
Tools in less than good condition are dangerous tools.

Know your tools, e.g., a screwdriver is not a punch.

Woe unto him who does not read his safety manual.

E in NAVY SAFETY

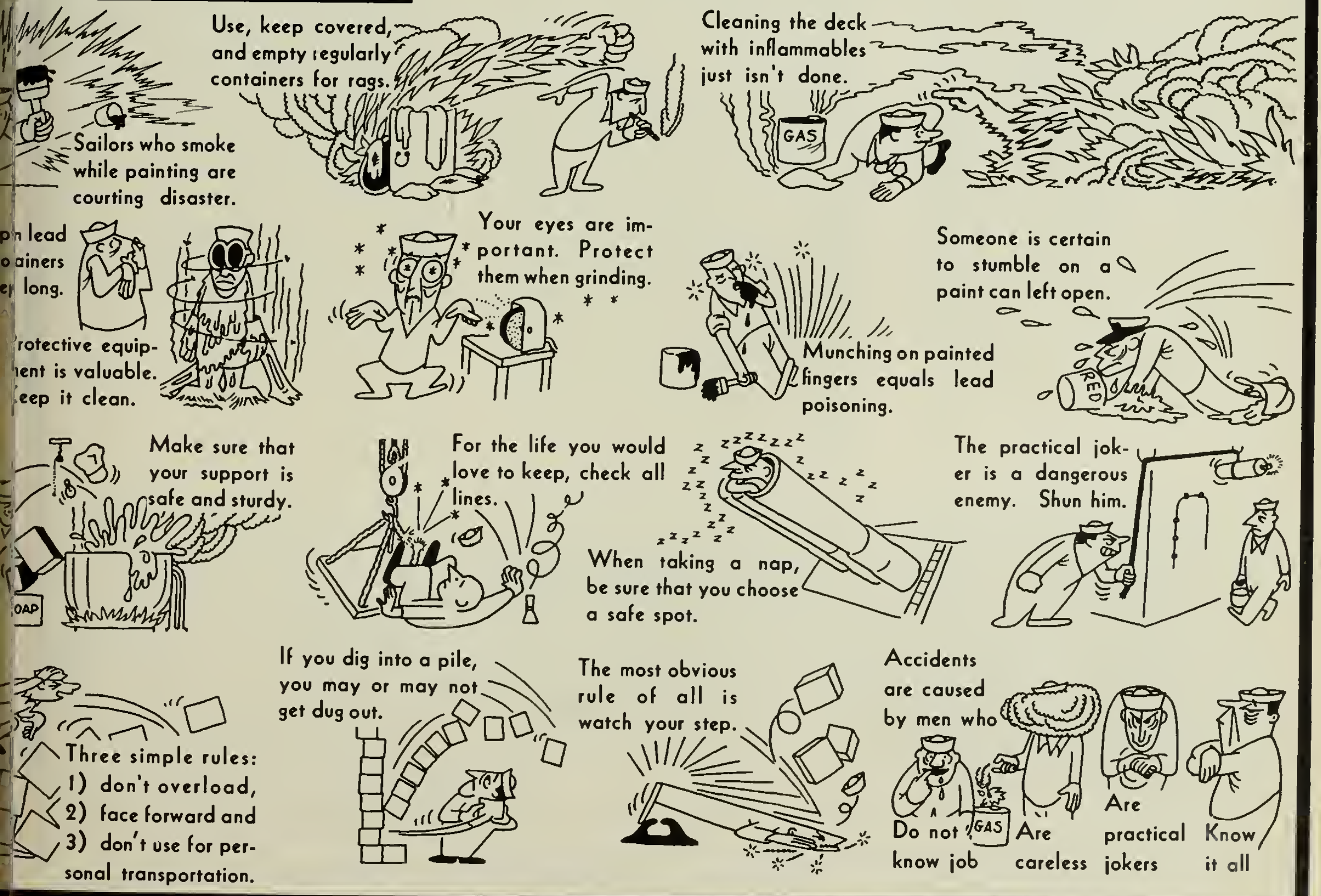
in ded among them. If you are, you'll want
r tice it on a 24-hour basis. Sure, the CO
u you can't expect that to include you unless
ne of your job, the way you think and the
ou'll be in when it's time to hit the sock.
r your own ignorance of the basic rules of
slogan: In the Navy, safety is no accident.



While welding keep sleeves and pants rolled right down.

Watch not the welder, if you do not have goggles.

Welding tends to heat metal. Put up warning signs.



Sailors who smoke while painting are courting disaster.

Use, keep covered, and empty regularly containers for rags.

Cleaning the deck with inflammables just isn't done.

h lead
ainers
e long.

rotective equipment is valuable. eep it clean.

Your eyes are important. Protect them when grinding.

Munching on painted fingers equals lead poisoning.

Someone is certain to stumble on a paint can left open.

Make sure that your support is safe and sturdy.

For the life you would love to keep, check all lines.

When taking a nap, be sure that you choose a safe spot.

The practical joker is a dangerous enemy. Shun him.

Three simple rules:
1) don't overload,
2) face forward and
3) don't use for personal transportation.

If you dig into a pile, you may or may not get dug out.

The most obvious rule of all is watch your step.

Accidents are caused by men who

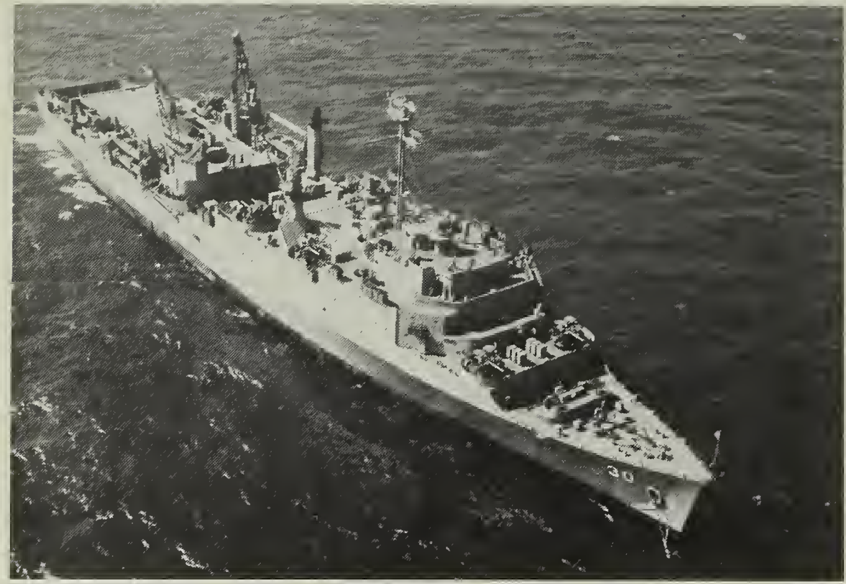
Do not know job

Are careless

Are practical jokers

Know it all

★ ★ ★ ★ TODAY'S NAVY ★ ★ ★ ★



AT EASE — *USS Fort Snelling* (LSD 30) rests anchor. The 'home port' for amphibious landing craft has her home port located at Norfolk, Virginia.

LantFleet's Good Samaritans

Sea salts as individuals aren't usually considered "salt of the earth" types—but collectively they proved during 1956 that the Navy and its men are willing Good Samaritans, and mighty handy to have around when trouble comes.

Most of this "helping hand" business was conducted without fanfare, particularly in the Pacific where the calls for aid have not been tied up with spectacular news events; much of the Atlantic Fleet's samaritanism has also been on the quiet side.

But LantFleet's "good works" during the year are pretty typical of what the Navy and Navymen have to offer people in distress—whether the trouble is a "newsmaker" like the Near East crisis, an earthquake, water shortage, hurricane or sudden peril on the high seas.

Some examples:

- *Suez Crisis.* Atlantic Fleet ships and personnel serving with the U. S. Sixth Fleet in the Mediterranean carried out the evacuation of 2175 civilians from Israel and Egypt, including 24 members of the United Nations Truce Commission. The transport USS *Burdo* (APD 133) and destroyer *Harlan R. Dickson* (DD 708) evacuated 166 persons from the Israeli port of Haifa, while the remainder were evacuated by three ships of Sixth Fleet's amphibious detachment, attack transport USS *Chilton* (APA 38), attack cargo ship *Thuban* (AKA 19) and landing ship dock USS *Fort Snelling* (LSD 30).

  Despite the hazards involved in the evacuation, typical American humor helped ease the situation. *Chilton,* for instance, greeted its tense guests with a spread of refreshments which included a large cake emblazoned with "We knew you were coming, so we baked a cake." APA 38's crewmen were treated to the sight of a burly boatswain's mate calmly giving a baby its bottle while the mother cared for her other children. And the erstwhile crew's recreation room pulled duty as a nursery, with 17 infants ranging in age from three weeks to nine months nestled in cribs made of cartons and egg crates.

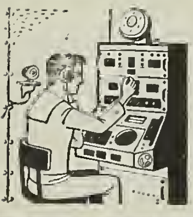
- *Bermuda "Water Lift"* was an operation undertaken during June, July and August, while Bermuda was experiencing a drastic decrease in water reserves as the result of unusually low annual rainfall. Fleet oilers USS *Truckee* (AO 147) and *Neosho* (AO 143), after cleaning their tanks, transported approximately 6,000,000 gallons of fresh water for use of the civilian populace, the Naval Station and the Air Force base.

- *Earthquake in Greece,* which destroyed or damaged about 80 per cent of the buildings on the island of Santorini, brought into action the destroyers USS *Lewis Hancock* (DD 675) and *Hawkins* (DDR 873). They landed food, medical supplies and medical officers to help the injured.

- *Iceland's Fishing Crisis.* For the second year in a row Iceland's major source of U. S. dollars, her herring industry, was plagued by killer-whales. And for the second time patrol aircraft from Iceland-based VP-7 used depth bombs to kill or frighten away the monsters which destroy nets and commercially valuable herring catches. The threat of a very short season of herring fishing and consequently heavy loss of income was thereby eliminated.

- *Hurricane Tracking,* a joint Navy, Air Force, U. S. Weather Bureau undertaking, engaged pilots and crewmen of Airborne Early Warning Squadron VW-4 in 37 flights into seven tropical storms which qualified as hurricanes. A

YESTERDAY'S NAVY



In April 1898, the Navy purchased SS *Creole* and made her over into a hospital ship, USS *Solace*, and a group of male nurses were recruited to serve as "Ship's Cook (Nurse)." In April 1945, one month before VE-Day, the Germans directed a last desperate sortie of *snorkel* subs against the U. S. coast. However, an American task force of destroyers and destroyer escorts met them in mid-ocean, where they battled for nearly two weeks. Guided by sound-detection devices, the U. S. task force repulsed the enemy, who lost six subs. The U. S. lost one DE.

number of "firsts" were racked up as the squadron's new WV-3 *Super Constellation* conducted the first overland tracking of hurricanes and the first rockets or "hurricane balls" were fired through the storms in a new effort to gather aerological data on the "big winds."

Aiding seafarers in distress was a common LantFleet occurrence during 1956:

- On 7 March, the destroyer USS *Vesole* (DDR 878) steamed out of Rhodes to aid a Norwegian merchant tanker which had a crewman badly burned in an engineroom explosion. Despite heavy weather, a highline rig was accomplished, and the DesRon's doctor treated the injured man aboard the tanker. Later the burned crewman was transferred to USS *Ticonderoga* (CVA 14) where complete medical facilities were available.
- Later in March the coastal minesweeper USS *Siskin* (MSCO 58) was successful in towing to safety the private schooner "Oreda." The schooner, in a sinking condition when *Siskin* took her in tow, and her "two-man" crew were safely delivered to Miami. Three days later USS *Rhea* (MSCO 52) investigated a red flare off Charleston, S. C., and wound up with the distressed private schooner "*Charmain*" in tow.
- From March through September underwater demolition divers from Explosive Ordnance Disposal Unit Two (part of LantFleet's Mine Force) answered eight calls from civilian communities for assistance in finding the bodies of persons believed to have drowned. The localities: Lakes and rivers throughout Georgia, Tennessee, North Carolina and South Carolina.
- In September, the destroyer USS *Strong* (DD 758) went to the aid of a honeymooning pair whose 38-foot ketch, "*Elenita,*" was adrift 50 miles off Corsica. *Strong* successfully towed the ketch to Ajaccio, Corsica, for repairs.

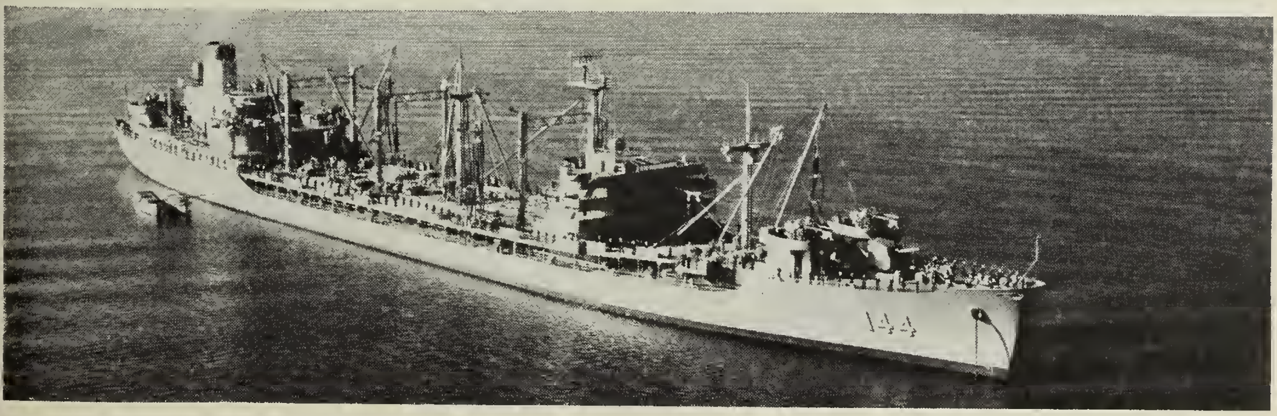
SEABEES AT Adak stand by totem pole designed by K. H. Munson *(left)* and carved by K. H. Geier and E. J. Luehrs.

- Early in October a dramatic sea rescue took place when the dock landing ship USS *Fort Mandan* (LSD 21) saved the Canadian motor vessel "*Lady Cecil*" from possible destruction off Newfoundland. *Lady "C,"* foundering in heavy seas and threatening to ground on the rugged shore only a mile away, was finally taken in tow and brought to safety after more than two days of constant effort.
- The yacht "*Virginian*" was rescued by the auxiliary ocean tug USS *Accokeek* (ATA 181) in December, while the tug was operating under Commander Service Force, U. S. Atlantic Fleet. The 68-foot yacht was off the British West Indies, engines inoperative and taking on water rapidly, when *Accokeek* took over. The tug set up emergency pumps on "*Virginian*" and took her to a safe anchorage.

During 1956 ships and men of the Atlantic Fleet, like their shipmates ashore and in the Pacific, maintained the spirit of goodwill and brotherhood so traditionally a part of the Navy. One example was the $7500 check presented by USS *Coral Sea* (CVA 43) to Hungarian relief (See story on page 28).

There are numerous other examples: the handicapped children entertained by destroyers at Newark and Washington; the submarine USS *Irex* (SS 482) playing host to 230 orphans and indigent children in Mediterranean ports; USS *Becuna* (SS 319) carrying donated clothing to the needy children of Europe; the destroyer USS *Charles S. Sperry* (DD 697) off-loading a statue of Commodore John Barry at Wexford, Ireland, as a gift from U. S. citizens to the Irish; LST's USS *Whitfield County* (LST 1169) and *Windham County* (LST 1170) donating 120 pints of blood to the Red Cross; and the instance on 18 March when an emergency call was put out by the Norfolk hospital for blood donors to save the life of a young girl. More than 200 officers and men from the U. S. Amphibious Base at Little Creek, Va., responded to the call.

FLEET FILLING STATION — Fleet oiler *USS Mississinewa* (AO 144) takes time out as her crew mans the rails.



Aid to Hungarian Refugees

Sixth Fleet . . . Navymen as goodwill ambassadors . . . MATS and MSTS—all these are part of a bigger story, the efforts of many nations to provide food, clothing and a "passage to freedom" for Hungarians who have fled their strife-torn homeland.

Naval ships and stations and the families of Navy personnel throughout the world did their share in contributing money and clothing to help the refugees; other naval craft and Navymen played a direct part in transporting uprooted Hungarians to new homes in the United States.

Money donations, which poured into relief organizations from such varied naval sources as the Bureaus in Washington and the ships operating with the Sixth and Seventh Fleets, included at least one check which resulted from an outstanding act of "goodwill ambassadorship" performed by Navymen:

USS *Coral Sea* (CVA 43), operating with the Sixth Fleet in the Mediterranean, was busy making plans for a big Christmas party to be held in Cannes, France, where the attack carrier was to spend the holidays. The enlisted recreation committee had decided to add a homelike touch to festivities by using recreation funds to present each man an individual gift costing about $3.00. Then someone tossed a "bombshell" into the meeting—Why not use the money to answer President Eisenhower's appeal for Hungarian relief?

FREEDOM FLIGHT — Hungarian refugees board Navy MATS plane before flight carrying them to United States.

The result of that idea—okayed in writing by every officer and man on board—was a check for $7500, to be used in aiding the refugees.

The example of Coral Sea was followed throughout the Navy as all hands rallied to aid the unfortunates.

Elsewhere, Navymen assigned to the Military Air and Sea Transportation Services were busy providing the "passage to freedom" for refugees invited to seek asylum in the United States.

While MATS-assigned Naval Air Transport Squadron Six worked alongside Air Force units in a gigantic "sky lift," the "sealift" was being carried out by MSTS transports USNS *General Leroy Eltinge* (T-AP 154), USNS *General W. G. Haan* (T-AP 158) and USNS *Marine Carp* (T-AP 199).

Eltinge, first to receive passengers for the long voyage to a new home, presents a representative picture of what the Navy's seaborne refugees found when they arrived aboard ship. T-AP 154 was in a reduced operational status when she received orders to Bremerhaven to pick up refugees; a short five days later she was completely remanned, supplied and underway.

To feed her passengers during the Atlantic crossing the Navy had supplied *Eltinge* with 200 tons of food, including 5000 pounds of turkey, 15 tons of potatoes, 4800 quarts of fresh milk, and 4800 quarts of ice cream. The American Red Cross had delivered $25,000 worth of assorted supplies—including 600 dozen diapers, 1000 pounds of candy, 200,000 cigarettes, bobby pins, playing cards, Hungarian-American dictionaries and Christmas gifts. MSTS, Atlantic Division, had stocked the ship with drums, guitars, violins, clarinets, Hungarian records, two pianos, an organ, hobby horses, 100 baby cribs and some of the latest moving pictures.

Following a two-day train ride from Austria, *Eltinge's* passenger contingent was taken aboard ship without speeches or ceremony, and immediately settled down to an American-style breakfast of ham and eggs, fresh milk, toast and cereal.

The last thing the refugees saw as USNS *Eltinge* steamed out of Bremerhaven en route to New York was a Navy patrol boat with banners bearing the Hungarian words "Isten Veletek"—*God be with you.*

'Intelligence Centers' of BuSandA Coordinate Supply Needs

If men of your Supply Department have displayed somewhat more pride in their Division than is customary these past months, they have their reason.

It's because this year marks the 10th anniversary of the Navy's Integrated Supply System. Its purpose is to coordinate the plans and programs of the Fleet to make sure it gets what it needs with a minimum inventory and the lowest over-all possible cost. The system provides the organization which buys, stores and issues all material — except original equipment — needed by the Navy. The Bureau of Supplies and Accounts administers the system.

The heart of the system is the inventory control offices, or "intelligence centers," which serve as control agencies to manage Navy supply stocks. During the 10 years of its operation, the system of supply intelligence centers has expanded until today everything from aspirin pills to anchors are included in the nearly 1.3 million items controlled from these offices.

The offices, formally known as "Supply Demand Control Points," include such well-known activities as the Aviation Supply Office, Philadelphia and the Ships Parts Control Center, Mechanicsburg, Pa.

The main job of these control points is to figure out how much of what will be needed by the Fleet to meet its operational needs of the future.

Then, it is up to the commanding officer of the control office to meet these needs with the help of the technical bureaus.

The specialized nature of the various "intelligence centers" does not mean that an individual ship must search out separate supply sources for each type of material. The ship obtains material from a consolidated supply depot or center carrying all types of material.

These local supply points maintain a constant flow of information about their stocks to the various specialized inventory managers. It is from this detailed flow of stock status reports that requirements are matched with consumption.

THE BULLETIN BOARD

The Latest on Rating Changes, Advancement Requirements

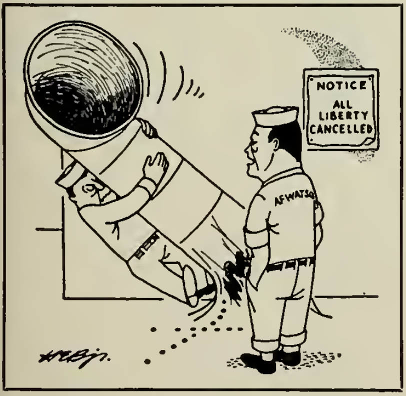
If you have had any tendency to consider changes to the *Manual of Qualifications for Advancement in Rating* as primarily administrative in nature, the publication of Change 8 should clearly demonstrate how important and vital such revisions are in affecting the careers of many Navymen.

Qualifications of 10 new emergency service ratings have been developed and seven emergency service ratings have been deleted. The change will be effective for the August 1957 advancement in rating examinations.

The *Teleman* (TE) general and emergency service ratings, disestablished by BuPers Notice 1223 of 1 Aug 1956, have been given special treatment. Generally, Telemen who have been assigned to telecommunication duties will convert to *Radioman* (RM) rating and those who have been assigned to post office and mail functions will convert to the *Yeoman* (YN) rating.

The qualifications for the Radioman and Yeoman ratings have been revised to include duties from the Teleman rating. Conversion to the new ratings will be gradual over a period of five years commencing with the August 1957 advancement examinations and ending with February 1961 exams.

Until a Telemen converts to his new rating, he will be given a transitional designation which indicates which rating he is aiming for: *Teleman/Radioman* (TE/RM) or *Teleman/Yeoman* (TE/YN). Cryptoboard and RPIO duties have been removed from the Teleman rating. These will be assigned to individuals rather than be the responsibility of a given rating. Detailed conversion procedures will be found in BuPers Inst. 1440.20.



"It's silly to vent one's displeasure on inanimate objects."

Here's a summary of the other changes: The *Radarman* (RD), *Sonarman* (SO), *Radioman* (RM), and *Electronics Technician* (ET) ratings have been revised to define more precisely the areas of primary responsibility for maintenance of electronic equipment.

The *Gunner's Mate* (GM) has been revised to include more supervisory and training responsibilities. The *Journalist* (JO) has been broadened to include more public information responsibility. The *Patternmaker* (PM) and *Molder* (ML) have been revised to clarify the duties of their emergency service ratings. The *Fire Control Technician* (FT) has been revised and two new emergency service ratings have been developed: The Fire Control Technician L (Integrated systems) (FTL) and the Fire Control Technician E (Electromechanical) (FTE). The *Yeoman* (YN) has been revised and a new emergency service rating of Yeoman M (mailman) (YNM) added. The equipment groupings of the *Tradevmen* (TD) have been changed and the four emergency service ratings have been combined into two: Tradevman I (Instructor) (TDI) and Tradevman R (Repairman) (TDR).

The old general service rating of *Boilermaker* (BR), established in 1869 and later disestablished, has been reactivated for pay grades E-6 and E-7, with scope and qualifications adapted to meet modern needs. At the same time, the two emergency service ratings of the *Boilerman* (BT) ratings have been disestablished: Boilerman (Shipboard Boilerman) (BTG) and Boilerman R (Boiler repairman) (BTR).

The following emergency service ratings have been developed and were previously announced by BuPers notice under the Selective Emergency Service Rating Program (SESR) for pay grade E-4:

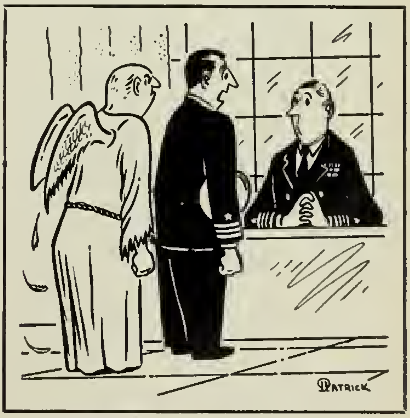
Fire Control Technician L (Integrated Systems) (FTL)
Fire Control Technician E (Electromechanical) (FTE)
Parachute Rigger S (Survivalman) (PRS)
Parachute Rigger M (Maintenance) (PRM)
Air Controlman W (Airborne CIC Operator) (ACW)
Air Controlman R (Radar) (ACR)
Air Controlman T (Tower) (ACT)

Qualifications have also been developed for the exclusive emergency service rating of *Aircraft Carburetor Mechanic* (ESA).

Seven emergency service ratings have been disestablished:

Tradevman R (Repairman, Nonaviation) (TDR), *Tradevman I* (Instructor, Nonaviation) (TDI), *Tradevman V* (Repairman, Aviation) (TDV), and *Tradevman U* (Instructor, Aviation) (TDU). (The four above have been combined into two emergency service ratings mentioned above: TDI and TDR). The remaining three are *Boilerman G* (shipboard boilerman) (BTG), *Boilerman R* (Boiler repairman) (BTR), and *Draftsman L* (Lithographic) (DML).

The qualifications contained in Change 8 are based on research conducted under the cognizance of the Chief of Naval Personnel in the implementation of approved recommendations of the Permanent Board for the Review of the Enlisted Rating Structure.



"He wants to file a complaint about our last guided missile test."

Check Your Rate and Estimate Your Chances for Advancement

SPACE LIMITATION in the January issue prevented us from giving you the complete story of your prospects for advancement in the immediate future and for the purposes of long-range planning. Below, you will find a table which shows future requirements and on-board strength of senior petty officers.

Its significance seems pretty clear to us, but to avoid misunderstanding, let's look at a specific rate, Aviation Electronics Technician (AT), as an example.

You'll notice that on-board strength for ATCs, as of 30 Jun 1956, was 1313, and the requirements for 30 Jun 1957 are 2145—an increase of 832 billets. You'll also note that there were 1400 AT1s as of 30 Jun 1956, with requirements for 30 Jun 1957 at 3215—an increase of 1805— twice as many needed in fiscal '57 as in '56.

"The second line, the word BVAXCDM, is spelled wrong!"

This is one of the fields that is expanding at an explosive rate and if you are in any of the top four pay grades, you've got it made.

On the other hand, electronics is a relatively young field and comparatively few—77 chiefs and only three PO1s—will be in a position to go out on 20 by 30 Jun 1958. You will notice too, that only 117 CPOs and 15 PO1s will reach 20 years before 30 Jun 1960. Obviously, retirement will have relatively little influence for ATs.

The picture is different for Boatswain's Mates. If you look only at the immediate future, the situation is grim. However, probable retirement of BMCs will more than take care of the differences between on-board strength of 30 Jun 1956 and the 30 Jun 1957 requirements. As for BM1s, the future may not look so good at first glance, but because of promotions, retirements and attrition, there will be plenty of room for career men.

Check your own rate and estimate your chances.

SENIOR PETTY OFFICERS STATISTICAL INFORMATION CONCERNING

Rate	On-board strength 30 Jun 1956	End FY 1957 requirements 30 Jun 1957	Number completing 20 years' service prior to 30 Jun 1958	Number completing 20 years' service between 30 Jun 1958 and 20 Jun 1960
BMC	3359	2700	955	808
BM1	4562	3245	197	376
QMC	1739	1440	320	398
(Combined QM/SM)				
QM1	2121	2165	26	52
(Combined QM/SM)				
RDC	331	800	8	20
RD1	939	1650	1	3
SOC	268	495	16	18
SO1	622	765	3	4
TMC	810	660	231	215
TM1	982	940	27	93
GMC	1840	1610	471	498
GM1	2675	2260	59	169
FTC	912	980	149	170
FT1	1201	1470	9	20
GSC	108	110	9	21
GS1	109	165	1	1
MNC	98	107	11	19
MN1	186	160	0	6
ETC	1245	1320	80	87
ET1	1571	1980	6	12
IMC	48	48	12	8
IM1	81	72	0	2
OMC	92	58	20	20
OM1	72	70	1	2
TEC	423	420	40	60
TE1	862	945	3	12
TE rating disestablished; requirement for TE is included in YN and RM, and is shown here for comparison only.				
RMC	1397	2140	161	209
RM1	1958	3265	18	30
CTC	868	950	78	85
CT1	655	1290	2	5
YNC	2070	2195	160	311
YN1	3478	3230	11	30
PNC	725	790	81	94
PN1	1064	1170	3	15
MAC	99	115	7	5
MA1	223	180	3	2
SKC	1305	1350	157	198
SK1	2061	2095	12	26
DKC	368	340	40	49
DK1	557	510	2	3
CSC	1384	1490	319	299
CS1	3306	2790	70	145
SHC	295	425	32	28
SH1	1409	1160	19	25
JOC	64	65	14	9
JO1	78	100	0	0
PIC	19	0	0	5
PI1	26	0	0	0
LIC	47	80	5	4
LI1	115	115	0	1
DMC	26	65	4	4
DM1	82	110	0	1
MUC	168	225	30	27
MU1	300	325	20	24
MMC	2540	2670	565	617
MM1	2955	4100	58	96
ENC	1881	2075	479	435
EN1	3536	3015	55	121

Rate	On-board strength 30 Jun 1956	End FY 1957 require-ments 30 Jun 1957	Number completing 20 years' service prior to 30 Jun 1958	Number completing 20 years' service be-tween 30 Jun 1958 and 20 Jun 1960
MRC	257	350	35	34
MR1	369	495	0	2
BTC	1419	1865	384	328
BT1	2231	2800	28	68
(BT includes new BR rating)				
EMC	1753	2055	206	239
EM1	2248	3080	13	42
ICC	387	545	68	58
IC1	333	890	0	8
MEC	689	700	151	202
ME1	1267	1045	24	53
FPC	442	505	70	91
FP1	791	755	3	21
DCC	581	585	114	122
DC1	1153	875	10	21
PMC	28	23	6	6
PM1	19	35	0	0
MLC	49	38	9	12
ML1	46	46	1	1
SVC	16	25	2	1
SV1	15	38	0	0
CEC	70	125	4	5
CE1	135	185	0	1
CDC	164	235	13	16
CD1	453	380	2	2
CMC	165	165	26	21
CM1	308	250	2	6
BUC	195	295	11	5
BU1	294	415	0	3
SWC	81	90	8	7
SW1	156	140	1	1
UTC	90	105	9	13
UT1	125	140	0	2
ADC	5239	3435	723	1263
AD1	6293	5150	117	307
ATC	1313	2145	77	117
AT1	1410	3215	3	15
ALC	581	—	100	97
AL1	604	—	7	13
AOC	1200	860	197	264
AO1	1493	1285	19	45
GFC	154	102	9	20
GF1	191	152	1	1
AQC	83	245	5	11
AQ1	139	365	1	2
ACC	289	530	18	24
AC1	565	790	0	4
ABC	355	425	30	47
AB1	782	640	1	6
AEC	654	990	49	78
AE1	997	1485	3	19
AMC	1507	1615	265	362
AM1	2330	2420	24	82
PRC	176	235	21	40
PR1	404	350	5	11
AGC	244	275	23	35
AG1	331	415	1	4
TDC	215	240	20	24
TD1	369	360	1	4
AKC	385	410	26	56
AK1	677	615	2	4
PHC	329	370	36	56
PH1	606	555	2	10
HMC	3599	2705	460	1026
HM1	4319	3595	15	68
DTC	351	320	28	43
DT1	543	475	0	7
SDC	794	710	118	136
SD1	2184	1140	180	427

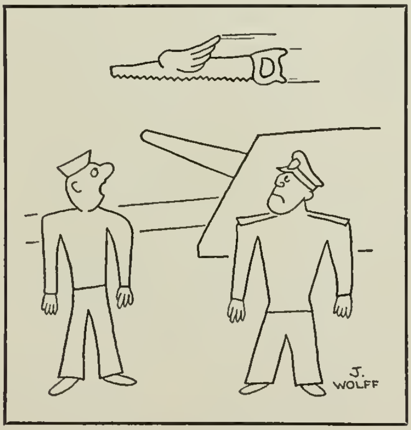
Training in Deep Sea Diving Is Open to USN, USNR Officers, Three Courses Are Available

Applications are wanted for USN and USNR unrestricted line or limited duty officers (other than aviators) for assignment to a course of instruction at the Naval School, Deep Sea Diving, Naval Gun Factory, Washington 25, D. C. Three courses are offered.

Successful completion of the school will normally lead to tours of duty in ASR-type ships and in the deep sea diving program of the Navy. Classes for the 21-week Diving Officer Course convene on the first Monday of February, April, August, and October of each year. The longer 26-week Diving Officer Course and the 10-week Prospective Commanding Officers Course convene 5 weeks before the above dates.

Here's a summary of the courses:

The 21-week course provides training in all phases of deep sea diving, with particular emphasis on submarine rescue operations and diving to maximum depths using helium-oxygen as a breathing medium. Instruction leading to qualification in the use of SCUBA equipment is also provided. Qualifications as a Salvage Officer or Diver Second Class is a prerequisite.



Look! It's a flying saw, sir!

The 26-week course provides five weeks of training for qualification as Diver Second Class, followed by 21 weeks of instruction as described above. No previous diving training required.

The prospective commanding officers' course provides an overview of the longer Diving Officer Course and is designed primarily for prospective commanding officers of submarine rescue vessels. Applications for this course are not desired. Officers of appropriate rank who are prospective commanding or executive officers of ASR-type ships will be ordered to take this course by the Chief of Naval Personnel as the need arises.

Applications are desired from the

officers listed above, including temporary officers, in the grades of ensign and lieutenant (junior grade), and warrant officers in the categories of boatswain and machinist. Reserve officers and temporary officers must agree in their applications to remain on active duty for one year after completion of the course.

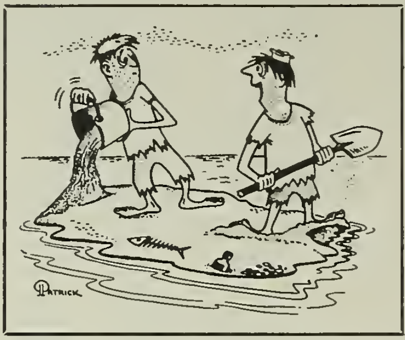
You must meet the following requirements before you submit a request for training:

- Complete a physical examination to determine fitness for training in diving. A statement by a medical officer certifying your physical fitness for deep sea diving training must accompany each application.
- Be interviewed by a qualified diving officer to ascertain, in so far as possible, your aptitude and motivation as regards diving duty. You must be a volunteer.
- Complete recompression chamber pressure test, including oxygen tolerance test.
- Perform an indoctrination dive, in a diving suit, under the supervision of a qualified diving officer.
- You must not have reached your 31st birthday before commencement of *initial* diving training. Applicants with previous qualification as Salvage Officer or Diver Second Class, or officers ordered as Commanding Officer or Executive Officer of diving-type ships, must not have reached their 40th birthday before training.
- Your commanding officer's endorsement is required.

Authorization may be found in BuPers Inst. 1520.43.

This instruction gives information on the general subject of diving for officers as well as application procedures.

"Now don't be a reluctant dragon."



"Just think! . . . Each day we're getting two feet closer to the mainland!"

List of Latest Motion Pictures Available for Distribution To Ships and Overseas Bases

The latest list of 16-mm. feature movies available from the Navy Motion Picture Service, Bldg. 311, Naval Base, Brooklyn 1, N. Y., is published here for the convenience of ships and overseas bases. The title of each picture is followed by the program number.

Those in color are designated by (C) and those in wide-screen processes by (WS). Distributions began in January.

These films are leased from the movie industry and distributed free to ships and most overseas activities under the Fleet Motion Picture Plan.

The Great Locomotive Chase (694) (C) (WS): Adventure Drama; Fess Parker, Jeff Hunter.

High Society (695) (C): Musical; Bing Crosby, Grace Kelly.

A Life At Stake (696): Drama; Angela Lansbury, Keith Andes.

Chain Of Evidence (697): Melodrama; Bill Elliott, Claudia Barrett.

The Eddy Duchin Story (698) (C): Drama; Tyrone Power, Kim Novak.

Storm Over The Nile (699) (C) (WS): Drama; Lawrence Harvey, Anthony Steel.

The Swan (700) (C): Comedy; Grace Kelly, Alec Guinness.

Flight To Hong Kong (701): Drama; Rory Calhoun, Dolores Donlon.

Fighting Trouble (702): Comedy; Huntz Hall, Stanley Clements.

Johnny Concho (703): Western; Frank Sinatra, Phyllis Kirk.

The Man Who Never Was (704) (C) (WS): Drama; Clifton Webb, Gloria Grahame.

The Search For Bridey Murphy (705): Drama; Teresa Wright, Louis Hayward.

Showdown At Abilene (706) (C): Western; Jack Mahoney, Martha Hyer.

Finger Of Guilt (707): Drama; Richard Basehart, Mary Murphy.

Attack (708): Drama; Jack Palance, Eddie Albert.

Ambassador's Daughter (709) (C) (WS): Comedy; Olivia DeHaviland, John Forsythe.

Cha Cha Cha-Boom (710): Musical; Stephen Dunne, Alix Talton.

Hot Cars (711): Adventure Drama; John Bromfield, Joi Lansing.

The Mole People (712): Science-Fiction; John Agar, Cynthia Patrick.

Bhowani Junction (713) (C): Drama; Ava Gardner, Stewart Granger.

On The Threshold Of Space (714) (C) (WS): Science-Fiction; Guy Madison, Virginia Leith.

Dakota Incident (715) (C): Western; Linda Darnell, Dale Robertson.

Beyond A Reasonable Doubt (716): Drama; Dana Andrews, Joan Fontaine.

The Cruel Tower (717): Drama; John Ericson, Mari Blanchard.

Back From Eternity (718): Drama; Robert Ryan, Anita Ekberg.

The Power And The Prize (719): Drama; Robert Taylor, Elizabeth Mueller.

The White Squaw (720): Western; David Brian, May Wynn.

Tension At Table Rock (721) (C): Western; Richard Egan, Dorothy Malone.

A Strange Adventure (722): Drama; Joan Evans, Ben Cooper.

The Unguarded Moment (723) (C): Drama; Esther Williams, George Nader.

D-day The 6th of June (724) (C) (WS): Drama; Robert Taylor, Richard Todd.

"Poor form."

Rock Pretty Baby (725): Drama; John Saxon, Sal Mineo.

Death Of A Scoundrel (726): Drama; George Saunders, Yvonne DeCarlo.

Huk (727) (C): Drama; George Montgomery, Mona Freeman.

The Solid Gold Cadillac (728): Comedy; Judy Holliday, Paul Douglas.

The Revolt Of Mamie Stover (729) (C) (WS): Drama; Jane Russell, Richard Egan.

You Can't Run Away From It (730) (C) (WS): Drama; June Allyson, Jack Lemmon.

Reprisal (731) (C): Adventure Drama; Guy Madison, Felicia Farr.

Hold That Hypnotist (732): Comedy; Huntz Hall, Stanley Clements.

Port Afrique (733) (C): Drama; Pier Angeli, Phil Carey.

Hot Shots (734): Comedy; Huntz Hall, Stanley Clements.

The Boss (735): Drama; John Payne, William Bishop.

Man From Del Rio (736): Drama; Anthony Quinn, Katy Jurado.

Gun The Man Down (737): Drama; James Arness, Angie Dickinson.

The Great Man (738): Drama; Jose Ferrer, Jeanne Gilbert.

The Man In The Grey Flannel Suit (739) (C) (WS): Drama; Gregory Peck, Jennifer Jones.

Stagecoach To Fury (740) (WS): Western; Forest Tucker, Mari Blanchard.

DIRECTIVES IN BRIEF

This listing is intended to serve only for general information and as an index of current Alnavs and NavActs as well as current BuPers Instructions, BuPers Notices, and Sec-Nav Instructions that apply to most ships and stations. Many instructions and notices are not of general interest and hence will not be carried in this section. Since BuPers Notices are arranged according to their group number and have no consecutive number within the group, their date of issue is included also for identification purposes. Personnel interested in specific directives should consult Alnavs, NavActs, Instructions and Notices for complete details before taking action.

Alnavs apply to all Navy and Marine Corps commands; NavActs apply to all Navy commands; BuPers Instructions and Notices apply to all ships and stations.

Alnavs

No. 6—Announced the convening of the annual TAR Review Board to recommend: 1.) Transfer from the TAR program of certain officers and; 2.) Selection of officers considered qualified for transfer to the TAR program for whom vacancies exist.

Instructions

1120-3E—Outlines the requirements and method of application for appointment of Naval Reserve medical and dental officers in the Medical Corps or Dental Corps, USN.

1611.10 — Provides information concerning assignment to duty with Joint, Combined, Allied and Office of Secretary of Defense Staffs, and sets forth implementing procedures relative to fitness reports and Flag selection board recommendations.

1540.2C — Contains information regarding the assignment of enlisted personnel to initial submarine training and duty and the return of personnel qualified in submarines to the submarine service.

Notices

No. 1440 (6 February)—Established procedures for effecting those changes in rating of personnel required in implementing changes in the Enlisted Rating Structure affecting personnel in the Boilerman (BT) rating who are on active duty.

No. 1534 (6 February) — Provided information to naval enlisted personnel who may be nominated to the U. S. Merchant Marine Academy by members of Congress, and as to the disposition of personnel who qualify and are accepted for appointment.

No. 1700 (8 February) — Announced the Fourth All-Navy Talent Contest and provided details concerning the competition.

No. 1710 (8 February)—Established procedures for the conduct of District, Fleet and U. S. Navy Rifle and Pistol Championships for 1957.

No. 1750 (11 February) — Announced Change No. 1 to BuPers Inst. 1750.1B, which is concerned with the Uniformed Services Contingency Act of 1953.

No. 1320 (12 February) — Announced Change No. 1 to BuPers Inst. 1320.4B, which is concerned with the assembly and training of crews for new construction or conversion ships other than submarines.

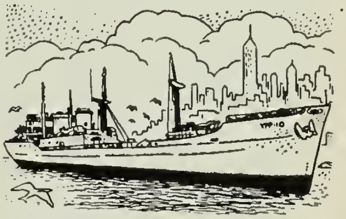
No. 1418 (12 February) — Provided information concerning the administration of Signalman and Quartermaster performance tests before receipt of new QM and SM performance test booklets.

HERE'S YOUR NAVY

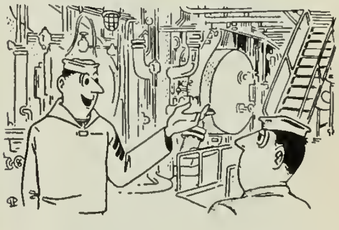
Although known only by a symbol and number among the Navy's many service craft, *YFP 10* has a claim to fame which cannot be equalled by any ship afloat.

Not only is *YFP 10* the Navy's newest floating power plant, but she's the world's largest. Her turbo-electric generating plant is capable of delivering 34,000 KW at 13,800 V, enough to supply the electric service needs of all but the largest port cities, industrial plants and Navy Yards.

Officially designated as a floating power barge, *YFP 10* is the former 5032-ton freighter *Coastal Racer* which was obtained by the Bureau of Yards and Docks from the National Shipping Authority of the Maritime Administration. What were once the No. 1 and 2 cargo holds are now being used for fuel oil storage, switch gear and compartments for three 11,500 KW turbines and direct-connected generators. A third hold houses three top-fired boilers—among the first of this type ever designed. They are equipped with economizers and steam air heaters. Boiler make-up is produced by evaporators with a capacity of 20,000 gallons daily.



When the 38-foot barge is in operation, a crew of 35 or 40 can live aboard in rehabilitated crew's quarters and galley, made out of the former after refrigerated cargo hold.



The Navy has two of these floating power barges. *YFP 10* is currently leased to a civilian power producing plant in Florida. *YFP 1* is loaned to the Army and operating in the Far East. (Other *YFPs* are in the process of redesignation, since they are designed only to service ships while in port.)

These *YFPs* stand ready to deliver emergency power wherever and whenever required.

Here's Latest Roundup for Navymen on State Tax Regulations

TAX TIME IS HERE AGAIN and your problems are our problems. In regard to your federal income tax we suggest you refer to the pamphlet published and distributed by the Bureau of Supplies and Accounts. This pamphlet is designed primarily for the use of Navymen on active duty and describes their rights and liabilities under federal income tax laws.

However, certain states, territories and possessions of the United States also have their own income tax laws under which you may have liabilities, in addition to the federal income tax. Below, you will find a summary of the requirements of the local income tax laws, as prepared by BuSandA.

You should note that, unless your State makes a special exception, members of the armed forces are not excused from state and local income taxes merely because they are on active duty.

Generally speaking, if you are a legal resident or domiciled in a state on the last day of a taxable year, you are liable to the income tax laws of that state, even though you did not actually live there during the entire year. Furthermore, you are usually liable for income taxes to the state in which you live or earn your income, as well as the state in which you are a legal resident. However, Section 514 of the Soldiers' and Sailors' Civil Relief Act of 1940, as amended, provides that a member of the armed forces who is a legal resident of one state but lives in another state only because of his military orders, is not liable to the state in which he is living for income taxes on his service pay. This does NOT apply to retired or retainer pay, or the separate income of any member of your family, or any of your income derived from other sources.

Let's say, for example, that your legal residence is Ohio, but you received orders to Washington, D. C. and have moved to Arlington, Virginia, with your family. You have no income other than your service pay. Since Ohio has no income tax laws, you are not required to file a return to the state of Ohio and, under the Soldiers' and Sailors' Civil Relief Act, you are not liable for filing a Virginia return. You have no problems —state income tax problems, that is.

Let's assume, however, that your pal came from Vermont and is on active duty in California. He pays income taxes in Vermont. He buys a house in California, not for the purpose of changing his legal residence, but only for a place to live while on duty in California. He intends to return to Vermont after his tour of active duty. He will be required to continue to file his state return to Vermont and under Section 514, California will not be able to impose an income tax on his service pay, even though he owns real estate in that state. However, if he is transferred from California and decides to rent his house as investment property, he would be liable to file a California return to report the rental income. If he decides to change his legal residence to California he will, then, of course, be subject to California state income tax laws.

Below, you will find a table which shows features of the income tax laws of the state, territorial and insular possessions of the United States. It primarily indicates the income requirements for the filing of returns by residents of states having income tax laws, the personal exemptions allowed, due dates for filing returns and paying taxes, the state office from which further details may be obtained, and special provisions applicable to service personnel.

SUMMARY OF INCOME-TAX LAWS OF STATES, TERRITORIES, AND POSSESSIONS

NOTE:
1. "Married couple" or "married" as used in this summary means husband and wife living together.
2. A married service man or woman is considered to be living with his or her spouse when separated only by reason of military orders.

Amount of income which requires residents to file returns	*Personal exemptions*	*Due date for return and payments*	*Title and address of taxing authority*	*Special provisions applicable to armed services personnel*
ALABAMA:				
Net income of: $1,500 or more if single; $3,000 if married or head of family. Declaration of estimated tax required if net income other than wages exceeds $1,500 for an individual and $3,000 for married couples.	$1,500 if single; $3,000 if married or head of family; $300 for each dependent.	Return due 15 April. Payment with return or in installments. Declaration due 15 April. Payment of estimated tax with declaration or in installments.	State Department of Revenue, Income Tax Division, Montgomery 2, Alabama	None. Members of Armed Forces outside continental United States may defer filing until 30 days after return to United States.
ALASKA:				
Over $600 income from source within the Territory.	$600 for taxpayer; $600 for spouse; $600 for each dependent. $600 additional for taxpayer and spouse for blindness and being 65 or over.	Return due 15 April. Payment with return.	Department of Taxation, Territory of Alaska, Alaska Office Building, Juneau, Alaska.	All active-service pay is exempt beginning 1 Jan. 1951. Members of Armed Forces may defer paying until 6 months after discharge if ability to pay is impaired by reason of military or naval service.

Amount of income which requires residents to file returns	*Personal exemptions*	*Due date for return and payments*	*Title and address of taxing authority*	*Special provisions applicable to armed services personnel*
ARIZONA: Net income of: $1,000 or more if single; $2,000 or more if married; $5,000 or more gross income.	$1,000 if single; $2,000 if married or head of household; $600 for each dependent. $500 additional for taxpayer and spouse for blindness.	Return due 15 April. Payment with return or in installments.	Arizona State Tax Commission, Income Tax Division, Phoenix, Arizona.	$1,000 active service pay is exempt. Members of Armed Forces outside Continental United States may defer filing returns and payment of tax, without interest or penalty, until 180 days after release or termination of present emergency, whichever is earlier.
ARKANSAS: Gross income of: $2,500 or more if single or separated from spouse; $3,500 or more if married.	$2,500 if single; $3,500 if married or head of family; $600 for each dependent.	Return due 15 May. Payment with return or in installments.	State of Arkansas, Department of Revenue, Little Rock, Arkansas.	All active-service pay is excluded from gross income.
CALIFORNIA: Net income of: $2,000 or more if single or head of household; $3,500 or more if married. Gross income of $5,000 or more.	$2,000 if single; $3,500 if married or head of household; $400 for each dependent. $500 additional for taxpayer and spouse for blindness.	Return due 15 April. Payment with return or in installments.	State of California, Franchise Tax Board, 1020 N Street, Sacramento 14, Calif.	$1,000 active-service pay received after 30 Jun 1952, is exempt. Members of Armed Forces outside continental United States on or after 8 Apr 1953 granted automatic extension for filing returns and payment of tax, without penalty or interest, until 180 days after return to United States, or 6 Jun 1955, whichever is later, if released after 8 Dec 1954.
COLORADO: Gross income of $600 or more.	$600 for taxpayer; $600 for spouse on joint return. $600 for each dependent. $600 additional for taxpayer and spouse for blindness and being 65 or over.	Return due 15 April. Payment with return or in installments.	State of Colorado, Department of Revenue, State Capitol Annex, Denver 2, Colorado.	$2,000 of active or reserve service pay is excluded from gross income during a time of war or national emergency; $1,000 may be excluded during any year that the United States is not in a state of war or national emergency. (The $2,000 exclusion will apply to 1956.) Members of Armed Forces may defer filing returns and payment of tax without penalty or interest until one year after separation.
CONNECTICUT: None.				
DELAWARE: Gross income of: $600 or more if single or separated from spouse; $1,200 combined gross income of married couple.	$600 for taxpayer; $600 for spouse; $600 for each dependent; $600 additional for taxpayer and spouse for blindness and being 65 or over.	Return due 30 April. Payment with return or in installments.	State of Delaware, State Tax Department, 843 King Street, Wilmington 99, Delaware.	None. Members of Armed Forces may, upon written application be granted deferment for filing and paying until 6 months after discharge.

Amount of income which requires residents to file returns	Personal exemptions	Due date for return and payments	Title and address of taxing authority	Special provisions applicable to armed services personnel
DISTRICT OF COLUMBIA:				
Gross income of: More than $1,000 if single, or separated from spouse; more than $2,000 of combined income of married couple or gross receipts of more than $5,000. Declaration of estimated tax required if gross income from wages subject to D. C. withholding plus $1,000 or less from other sources exceeds personal exemptions plus $5,000; or if gross income includes more than $1,000 not subject to D. C. withholding and exceeds personal exemptions plus $500.	$1,000 if single or separated from spouse; $2,000 if married or head of family; $500 for each dependent.	Return due 15 April. Payment with return. Declaration due 15 April. Payment of estimated tax due with declaration or in installments.	District of Columbia, Income and Franchise Tax Division, Room 2033, Municipal Center, 300 Indiana Ave., N.W. Washington 1, D. C.	None. Deferment for filing returns or paying taxes granted members of Armed Forces outside the United States until 6 months after return.
FLORIDA: None.				
GEORGIA:				
Gross income of: $1,500 or more if single or separated from spouse; $3,000 combined gross income of married couple.	$1,500 if single; $3,000 if married or head of family; $600 for each dependent. $600 additional for taxpayer and spouse for blindness and being 65 or over.	Return due 15 April. Payment with return or in installments.	Department of Revenue, Income Tax Unit, 502 State Office Building, Atlanta 3, Georgia.	$1,500 active-service pay is excluded from gross income from 1 January 1950 until termination of the Korean conflict. (This exclusion will apply for 1956.) Deferment for filing returns or paying taxes granted members of the Armed Forces outside continental United States until the 15th day of the fourth month after return to the United States.
GUAM:				
Gross income of: $600 or more.	$600 for taxpayer; $600 for spouse; $600 for each dependent. $600 additional for taxpayer and spouse for blindness and being 65 or over.	Return due 15 April. Payment due with return.	Division of Revenue and Taxation, Commissioner's Office, Department of Finance, Government of Guam, P.O. Box 1086, Agana, Guam.	Income of members of Armed Forces subject to same computations as for Federal returns.
HAWAII:				
Any amount from rents or a profession. Other income from within or without the Territory — $1,100 if single, $2,200 if married, or gross income from compensation and/or dividends taxable under Compensation or Dividends Tax Law, with exception of $50 or less interest, etc., $2,850 if single, $5,900 if married.	$1,000 if single; $2,000 if married or head of family; $200 for each dependent. $5,000 exemption in lieu of normal exemption for taxpayer if blind.	Net income tax; Return due 20 April. Payment with return or in installments. Compensation and dividends tax: Return and payment due on or before 20th day of each month.	Bureau of Income and Miscellaneous Taxes, Territory of Hawaii, Department of the Tax Commissioner, P.O. Box 259, Honolulu 9, Hawaii.	Compensation received from the United States for service in the Armed Forces is excluded from gross income. Members of Armed Forces may defer paying not later 6 months after discharge if ability to pay is impaired by reason of such service.

Amount of income which requires residents to file returns	*Personal exemptions*	*Due date for return and payments*	*Title and address of taxing authority*	*Special provisions applicable to armed services personnel*
IDAHO:				
Net income of: $700 if single or separated from spouse; $1,500 combined income of married couple. Gross income of $5,000, regardless of net income.	$700 if single; $1,500 if married; $200 for each dependent. $5 credit from tax for each dependent in addition to exemption.	Return due 15 April. Payment with return or in installments.	State of Idaho, Office of Tax Collector, Income Tax Division, P.O. Box 1399, Boise, Idaho.	Idaho servicemen exempt if serving outside the State. Members of Armed Forces outside continental limits of United States may defer filing returns and paying taxes until 6 months after discharge.
ILLINOIS: None.				
INDIANA:				
Gross income over $1,000. Joint returns not permitted.	$1,000 for each taxpayer.	Quarterly returns (required when tax for any quarter exceeds $25) due by 30 April, 31 July, and 31 October. Annual return due 31 January. Payment with return.	Indiana Department of State Revenue, Gross Income Tax Division, 141 South Meridian Street, Indianapolis 13, Indiana.	All active-service pay is exempt. Members of Armed Services may defer filing returns and paying tax until 6 months after discharge.
IOWA:				
Net income of: $1,125 or over if single; $1,750 or over if married.	Credit from tax: $12 if single; $24 if married or head of family; $12 for each dependent.	Return due 30 April. Payment due with return or in installments.	State Tax Commission, Income Tax Division, State Office Building, Des Moines 19, Iowa.	None.
KANSAS:				
Net income of: $600 or more if single or separated from spouse; $1,200 or more if married. Gross income of: $4,000 or more.	$600 for taxpayer; $600 for spouse; $600 for each dependent. $600 additional for taxpayer and spouse for blindness and being 65 or over.	Return due 15 April. Payment with return or in installments.	State Commission of Revenue and Taxation, Income Tax Division, Statehouse, Topeka, Kansas.	$1,500 active-service pay excluded from gross income until the termination of the present world crisis as determined by the Executive Council of the State. Deferment granted members of Armed Forces for filing returns and paying taxes until 1 year after discharge or 1 year after termination of present world crisis, whichever is earlier.
KENTUCKY:				
Gross income of: $600 or more; $1,200 if individual is 65 years of age. Declaration of estimated tax required if gross income will be $600 or more, and if gross income from sources other than wages will be $100 or more.	Credit from tax: $12 for taxpayer; $12 for spouse; $12 for each dependent. $12 additional for taxpayer and spouse 65 or over, or blind.	Return due 15 April. Payment with return. Declaration due 15 April. Payment of estimated tax with declaration or in installments.	Commonwealth of Kentucky, Department of Revenue, Frankfort, Kentucky.	None. Members of the Armed Forces may defer filing returns and paying taxes until 12 months after termination of the national emergency, or termination of military service, whichever is earlier.
LOUISIANA:				
Net income of: $2,500 or more if single or separated from spouse; $5,000 or more if married. Gross income of: $6,000 or more.	$2,500 if single; $5,000 if married or head of family; $400 for each dependent.	Return due 15 May. Payment with return or in installments.	State of Louisiana, Department of Revenue, Baton Rouge 1, Louisiana.	None. Members of Armed Forces on sea or foreign service duty, and prisoners of war, on due date of return have deferment until 15th day of 5th month following return to continental United States.
MAINE: None.				

	Amount of income which requires residents to file returns	Personal exemptions	Due date for return and payments	Title and address of taxing authority	Special provisions applicable to armed services personnel
MARYLAND:	Gross income in excess of: $800 if single; $1,600 if married or head of family. Declaration of estimated tax required if income will be $500 or more not subject to withholding, and total gross income will be $1,500 or more if single and $2,500 or more if married.	$800 if single; $1,600 if married; $800 for each dependent. $800 additional for taxpayer and spouse if over 65 or blind, and for dependents over 65.	Return due 15 April. Payment with return. Declaration due 15 April. Payments of estimated tax with declaration or in installments.	State of Maryland, Comptroller of the Treasury, Income Tax Division, Annapolis, Maryland.	$1,500 of active-service pay excluded from gross income beginning calendar year 1951. Members of Armed Forces outside continental United States may defer filing until 3 months after return.
MASSACHUSETTS:	Earned income of $2,000 or more; other taxable income in any amount.	$2,000 for taxpayer against earned income; $500 for spouse; $400 for each dependent. $2,000 additional for blindness.	Return due 15 April. Payment with return.	The Commonwealth of Massachusetts, Department of Corporations and Taxation, Income Tax Division, 40 Court Street, Boston, Massachusetts.	None.
MICHIGAN: None.					
MINNESOTA:	Gross income in excess of: $1,000 if single; $2,000 if married or head of household, or if combined income of married couple exceeds $2,000.	Credit from tax: $10 if single; $30 if married or head of household; $10 for each dependent. Additional credits for taxpayers for blindness and being 65 or over.	Return due 15 April. Payment with return or in installments.	State of Minnesota, Department of Taxation, Income Tax Division, 6th Street at Jackson, St. Paul 1, Minnesota.	$3,000 active-service pay excluded from gross income. Members of Armed Forces outside continental United States continuously for more than 90 days granted extension of time until 6 months after return.
MISSISSIPPI:	Net income in excess of personal exemptions. Gross income over $6,000.	$4,000 if single; $6,000 if married. No personal exemption for dependents.	Return due 15 April. Payment with return or in installments.	State Tax Commission, Income Tax Division, Jackson, Mississippi.	None.
MISSOURI:	Gross income of: $1,200 or more if single; $2,400 or more if married or head of family.	$1,200 if single; $2,400 if married or head of family; $400 for each dependent.	Return due 15 April. Payment with return.	State of Missouri, Department of Revenue, Division of Tax Collection (Income Tax), P. O. Box 629, Jefferson City, Missouri.	$3,000 active-service pay exempt beginning with calendar year 1951.
MONTANA:	Net income of: $1,000 or over if single; $2,000 or more if married or head of family. Declaration of estimated tax required where income not subject to withholding can be expected to equal or exceed income subject to withholding.	$1,000 if single; $2,000 if married or head of family; $300 for each dependent.	Return due 15 April. Payment with return or in installments. Declaration due 15 April. Payment of estimated tax with declaration or in installments.	State of Montana, Board of Equalization, State Capitol Building, Helena, Montana.	None. Members of Armed Forces may defer filing returns and paying taxes until 6 months after discharge in cases of undue hardship caused by military service.
NEBRASKA: None.					
NEVADA: None.					

Amount of income which requires residents to file returns	*Personal exemptions*	*Due date for return and payments*	*Title and address of taxing authority*	*Special provisions applicable to armed services personnel*
NEW HAMPSHIRE:				
Any amount of taxable income from interest or dividends. Joint returns not permitted.	$600 for each taxpayer.	Return due 1 May. Payment with return.	State Tax Commission, Division of Interest and Dividends, Concord, New Hampshire.	None.
NEW JERSEY: None.				
NEW MEXICO:				
Gross income of: $1,500 or more if single; $2,500 or more if married.	$1,500 if single; $2,500 if married; $200 for each dependent.	Return due 15 April. Payment with return or in installments.	State of New Mexico, Income Tax Division, Bureau of Revenue, P. O. Box 451, Santa Fe, New Mexico.	None.
NEW YORK:				
Combined net income and capital gain of: $1,000 or more if single or separated from spouse; $2,500 or more if married or head of family. (Note: Net income is computed without deduction of capital losses.) Combined gross income and capital gain of $5,000 or more.	$1,000 if single; $2,500 if married or head of family; $400 for each dependent. $400 additional for taxpayer and spouse for blindness and being 65 or over (reduced by gross income over $6,000).	Return due 15 April. Payment with return or in installments.	State of New York, Department of Taxation and Finance, Income Tax Bureau, Albany 1, New York.	None.
NORTH CAROLINA:				
Net income of: More than $1,000 if single or separated from spouse or if married woman with separate income; $2,000 if a married man living with wife, or head of a household, or if a widow or widower having minor child. Gross income of more than $5,000 from a business or profession. Joint return not permitted unless the income is from jointly owned property.	$1,000 if single or a married woman having separate income; $2,000 if married man living with his wife, or head of a household; $2,000 if widow or widower with minor child; $300 for each dependent. $1,000 additional if blind.	Return due on or before 15 April. Payment due with return or in installments.	State of North Carolina, Department of Revenue, Individual Income Tax Division, Raleigh, North Carolina.	None.
NORTH DAKOTA:				
Net income of: $600 or more if single or separated from spouse; $1,500 or more if married or head of household. Gross income of: $5,000 or more.	$600 if single; $1,500 if married or head of household; $600 for each dependent. $600 additional for taxpayer and spouse 65 or over.	Return due 15 April. Payment with return or in installments.	State of North Dakota, Office of Tax Commissioner, State Capitol Building, Bismarck, North Dakota.	All active-service pay is exempt. Deferment granted to members of armed forces until the 15th day of 6th month following discharge.
OHIO: No personal income tax, but residents of some Ohio cities and municipalities may be liable for income taxes.				
OKLAHOMA:				
Gross income of: $1,000 or more if single; $2,000 or more if married.	$1,000 if single; $2,000 if married or head of family; $500 for each dependent.	Return due 15 April. Payment with return or in installments.	Oklahoma Tax Commission, Income Tax Division, State of Oklahoma, Oklahoma City 5, Oklahoma.	$1,500 of active-service pay excluded from gross income.

Amount of income which requires residents to file returns	Personal exemptions	Due date for return and payments	Title and address of taxing authority	Special provisions applicable to armed services personnel
OREGON: Net income in excess of personal exemptions. Gross income of: $4,000 or more.	$500 if single, or separated from spouse; $1,000 if married or head of family; $500 for each dependent. $500 additional for taxpayer or spouse if blind. $6 credit from tax for each taxpayer 65 or over. Additional "Hardship" exemption on incomes under $1,000 if single, and $1,500 if married.	Return due 15 April. Payment with return or in installments.	State Tax Commission, Income Tax Division, 100 State Office Building, Salem, Oregon; or State Tax Commission, 1400 S.W. 5th Avenue, Portland, Oregon.	$3,000 active-service pay is excluded from gross income. Members of Armed Forces have extension of time for filing returns and paying taxes by disregarding period of active duty outside the United States, subject to minimum of 90 days.
PENNSYLVANIA: No personal income tax, but residents of some Pennsylvania cities and municipalities may be liable for local income taxes.				
PUERTO RICO Net income of: $800 or over if single or separated from spouse; or if head of family; $2,000 or over if married. Gross income of: $5,000 or more.	$800 if single or separated from spouse; $2,000 if married or head of family; $400 for each dependent.	Return due 15 April. Payment with return or in installments.	Commonwealth of Puerto Rico, Department of the Treasury, Bureau of Income Tax, San Juan (Santurce), P. O. Box 3517, Santurce, Puerto Rico.	None generally, however a special $500 deduction is allowed to veterans. Members of Armed Forces outside Puerto Rico may defer filing and paying.
RHODE ISLAND: None.				
SOUTH CAROLINA: Net income of: $1.000 or more if single or separated from spouse; $1,800 or more net aggregate income of married couple.	$1,000 if single; $2,000 if married or head of a household; $400 for each dependent.	Return due 15 April. Payment with return or in installments.	South Carolina Tax Commission, Income Tax Division, Drawer 420, Columbia 1, South Carolina.	Income of members of Armed Forces subject to same computations as for Federal returns.
SOUTH DAKOTA: None.				
TENNESSEE: Income of $25 or more from dividends and interest.	None.	Return due 15 April. Payment with return.	State of Tennessee, Department of Finance and Taxation, Income Tax Division, Nashville, Tennessee.	None.
TEXAS: None.				
UTAH: Gross income of: $600 or more if single or separated from spouse; $1,200 or more if married.	$600 if single; $1,200 if married; $600 for each dependent; $600 additional for taxpayer and spouse for blindness.	Return due 15 April. Payment with return.	State Tax Commission, 118 State Capitol, Salt Lake City, Utah.	None.
VERMONT: Gross income of: $500 or more. Declaration of estimated tax required on income not subject to withholding.	$500 for taxpayer; $500 for spouse; $500 for each dependent. $500 additional for taxpayer and spouse for blindness and being 65 or over.	Short form return due 15 March. Long form return due 15 April. Payment with return. Declaration due 15 April. Payment of estimated tax with declaration, or in installments.	Commissioner of Taxes, Montpelier, Vermont.	Income of members of Armed Forces subject to same computations as for Federal returns. Members of the Armed Forces may defer filing returns and paying taxes no later than 6 months from date of discharge.

Amount of income which requires residents to file returns	Personal exemptions	Date due for return and payments	Title and address of taxing authority	Special provisions applicable to armed services personnel
VIRGINIA: Gross income of: $1,000 or more.	$1,000 for taxpayer; $1,000 for spouse; $200 for each dependent. $600 additional for taxpayer and spouse for blindness and being 65 or over. $800 additional for dependent mother, father, son, daughter, brother, or sister of unmarried taxpayer.	Return due 1 May. Payment with return or in installments.	Commissioner of Revenue, of the county of which taxpayer is a resident; or Commonwealth of Virginia, Department of Taxation, Richmond 15, Virginia.	None.
WASHINGTON: None.				
WEST VIRGINIA: None.				
WISCONSIN: Net income of: $1,400 combined net income of married couple. Gross income of: $600 or more.	Credit from tax: $7 if single; $14 if married or head of family; $7 for each dependent.	Return due 15 April. Payment with return or in installments.	State of Wisconsin, Department of Taxation, Room 1000, State Office Building, Madison 2, Wisconsin; or Assessor of Income for county in which taxpayer resides.	$1,500 active-service pay is excluded through 1956. Extension of time for filing returns and paying taxes is granted to members of the Armed Forces outside the United States on the date their taxable year ends or the date returns are due, until 6 months after discharge, but in no case after 15 Jun 1957.
WYOMING: None.				

Four New Enlisted Correspondence Courses

Four new Enlisted Correspondence Courses have been made available and four earlier courses have been discontinued.

Enlisted Correspondence Courses will be administered (with certain exceptions) by your local command instead of by the Correspondence Course Center.

If you are on active duty, your division officer will advise you whether or not the course for which you have applied is suitable to your rate and to the training program you are following in your Navy career.

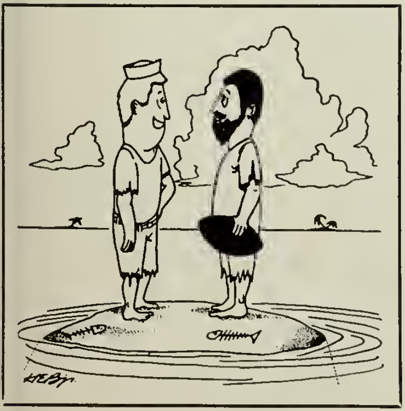
Personnel on inactive duty will have their courses administered by the Correspondence Course Center, just as in the past, using Form NavPers 580.

The new or revised courses are:

Torpedoman's Mate 2, Vol. 1	91302-1
Construction Electrician's Mate 2	91569-1
Driver 1	91575-1
Fire Control Technician 3	91339

Courses which have been discontinued are:

Course	NavPers No.
Aircraft Electrical Systems	91607
Aircraft Munitions	91637
Torpedoman's Mate (E) 3	91301
Torpedoman's Mate (E) 2	91303



"What'll the goals be?"

Two New Correspondence Courses Ready for Officers

Two new officer correspondence courses are now available at the Naval Correspondence Course Center.

Naval Sonar (NavPers 10928) is a six-assignment course evaluated at 12 points credit for purposes of Naval Reserve promotion and retirement.

Administration of Officers' Messes (NavPers 10970-A) is a five-assignment course evaluated at 10 points credit. This course replaces an earlier one of the same title, NavPers 10970.

Personnel who completed the earlier course will receive additional credit for NavPers 10970-A if they are otherwise eligible to receive credit in this subject.

Application for enrollment should be made on form NavPers 992 (Rev 10/54 or Rev 2/56), forwarded via official channels to the Naval Correspondence Course Center, Building RF, U. S. Naval Base, Brooklyn 1, New York.

"Should reclassify him . . . possibly Airman!"

BOOKS: GOOD NON-FICTION TITLES IN MONTH'S SELECTIONS

YOU'LL FIND NO fiction selected for review this month, but no matter what your tastes you'll find plenty of exciting and interesting reading. You will, of course, be able to select from a wide range of fiction in your ship or station library at any time but this month you'll also find outstanding books on such subjects as the FBI, the war in Korea, the possibilities of flying to the moon, the capabilities of man, meeting the demands of the technological age, and of its leading exponent — ERMA (Electronic Recording Machine — Accounting).

David Woodbury says ***Let Erma Do It*** and tells why. His highly readable survey of the industrial roles of automation tells of machines that are able not only to perform useful functions, but also to regulate, adapt and reconstitute their own operations as the need arises. Almost every Navyman is concerned in one way or another with automation and many may find the principles that are discussed somewhat elementary, but all hands will find the applications of these principles of great interest. You'll like his discussion of future possibilities.

Still in the Buck Rogers context is ***Earth Satellites,*** by Patrick Moore, who brings the dreamers down to earth with his clear, specific discussion about man's first step into space. He discusses the satellite project and conveys a sense of reality by discussing its limitations and sheer hard work of a purely mechanical nature. He explains the original forms of rockets, how they were originally conceived and how they were perfected up to their present state. He speculates over the physical laws and natural forces which lie in outer space, the possibility of a landing on the moon or Mars, and what might be found as well as the importance of a real space station for both research purposes and further voyaging.

"Don't feel bad, Watson, there'll be other islands."

You may have noticed considerable discussion concerning the vehicles with which we are to achieve interstellar flight, but little about the men who are to control them. This oversight is corrected in ***Man Unlimited,*** by Heinz Gartmann. He answers a number of questions of immediate concern. Which are the maximum speeds a human body can endure? How does excessive noise affect our nervous system? What happens to a body outside of gravity? How will you respond to lack of oxygen, extremes of heat and cold, or reduced air pressure? Are you sure that radioactive radiations are harmful to human life?

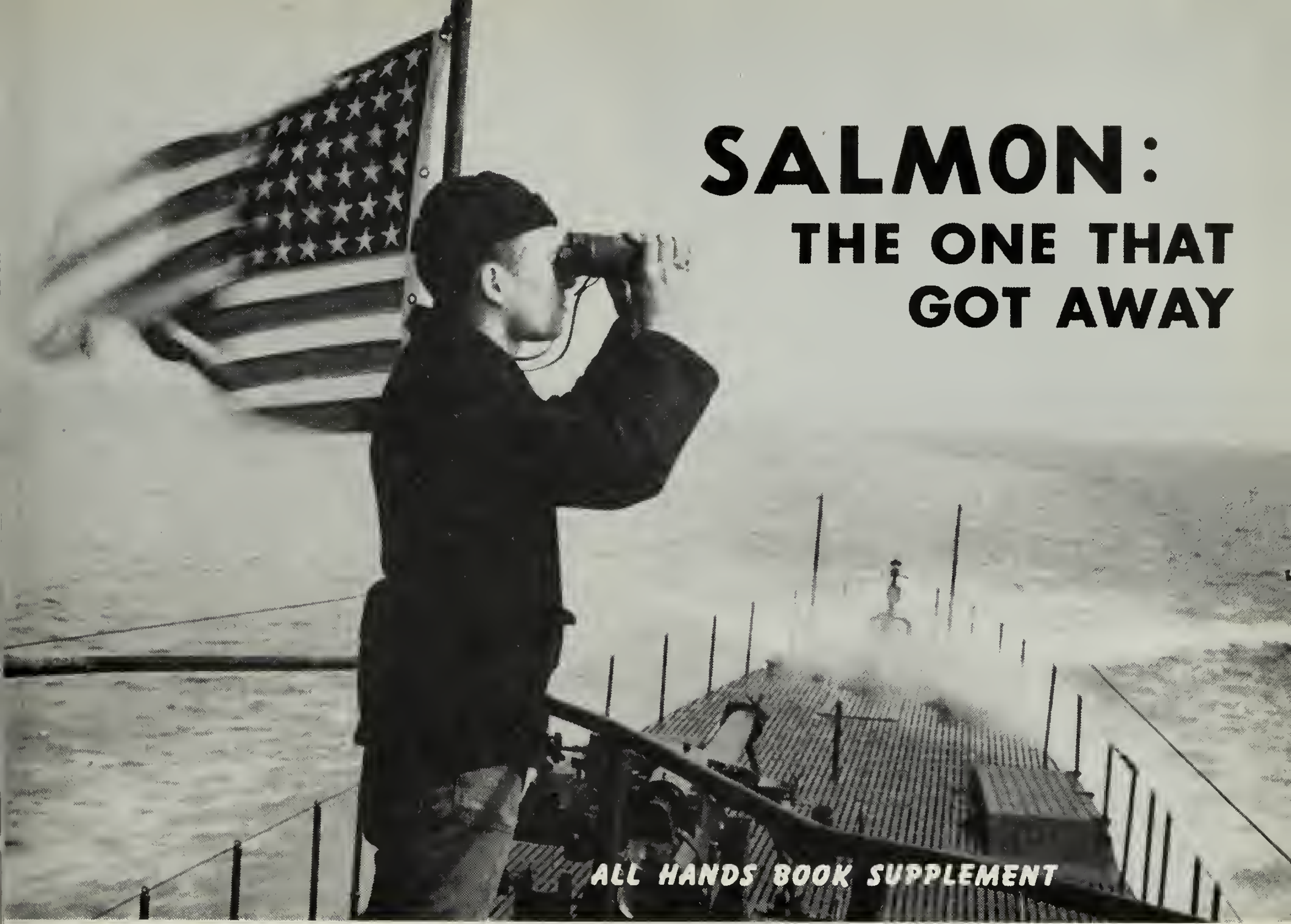
The author also discusses items of wide interest, such as the time rhythm of each person and what happens when it is disturbed; the tortuous experiments of pioneers in many fields of science; the sources of fatigue and its result. He also discusses the equipment and training necessary to conquer outer space and, for the relatively lighter touch, automation and the electronic brain.

After being up in the air thus far, a whiff of salt water may be a relief. If so, ***Free Diving,*** by Dimitri Rebikoff, is for you. Here, an expert and an enthusiast on the subject tells about it. He explains the principles of free diving and discusses the development of equipment, diagrams, diseases, and the dangers of the deep in terms of responses at various levels. He also reports on control of equipment, as well as weather and water. But not all is concerned with danger. He describes diving clubs in the United States, manufacturers, distributors, and best suited areas for diving—all in direct language.

The battle began 16 Apr 1953 and lasted 48 hours. Locale: Korea. The destinies of the men who participated in that engagement is described in ***Pork Chop Hill,*** by Brigadier General S. L. A. Marshall. He tells of the men rather than the battle. Gen. Marshall builds his book on very limited engagements — a platoon or two, small-gun warfare by individual soldiers with names, wounds and comments and all treated matter-of-factly. So-and-so fired a burp gun, or played dead to avoid capture; or blinded, sat facing a door, ready to fire at the sound of footsteps. The first two-thirds of the book is concerned entirely with Pork Chop Hill in which Gen. Marshall traces the record of the various companies who were engaged in the defense of the hill, tells what led up to the battle and what came after. A final section is devoted to the action of six night patrols. Combined, it forms a portrait of modern war, and the hero and villain is man himself.

The FBI Story, by Don Whitehead, is an adult history of the FBI and, although written with the full cooperation of J. Edgar Hoover, is not an "official" version. It combines the chronological history, the trial and error methods and inadequacies that marked it through World War I, the development of its present high standard of performance and detailed reporting of some of the spectacular cases that the FBI has handled. Since its reorganization began under President Coolidge, the years have witnessed the gangsters' rise to power, the underworld at its peak, Communist penetration, and the response, in each case, of the FBI. During that time, it has succeeded in breaking the power of the leaders of crime, solving major mysteries, destroying conspiracies, securing legislation and, perhaps the most important of all, putting investigation on a high level of trained scientific procedure. The final chapter clarifies what the FBI is, and is not. Good factual reading.

"We shouldn't have requested any river command."



SALMON:
THE ONE THAT GOT AWAY

ALL HANDS BOOK SUPPLEMENT

In the December issue of ALL HANDS, brief reference was made to the commissioning of a new radar picket sub, USS *Salmon* (SSR 573). We then stated her ancestor, SS 182, "was a veteran of 11 Pacific patrols during World War II, winning the Presidential Unit Citation for 'extraordinary heroism against enemy surface craft'." This is the story of SS 182 and, in some detail, the story of her 11th, and last, patrol.

The third vessel in the U. S. Navy to be named Salmon *was built in Groton, Conn., and launched on 12 Jun 1937. This vessel was the first of the new "S" class authorized in 1935 and built in accordance with the London Treaty for the limitation of armaments.*

On 15 Mar 1938 the submarine was placed in full commission as USS Salmon *(SS 182) and a routine shakedown training cruise was conducted during the spring and summer of 1938 as the sub ranged from Nova Scotia to the Gulf of Mexico while conducting her training operations.*

By the time the war started Salmon *had been with the Fleet for three years and was then operating out of the Philippines. On the day Manila was attacked,* Salmon *was underway from Formosa to Manila Bay. On 10 December she had arrived at Manila and commenced preparation for her first war patrol.*

USS *Salmon* was blooded on the first day of her first patrol. Shortly before midnight while en route to her assigned patrol grounds in the Lingayen Gulf—and while surfaced and charging her batteries—the watch sighted a vessel on the horizon.

Some 30 minutes later the contact was identified as two destroyers about 5000 yards off, closing at low speed and maneuvering to keep their bows headed into the sub's stern.

As the ships closed to 2500 yards, one Japanese destroyer presented a broad beam and *Salmon* fired a brace of torpedoes, which missed. The enemy ships turned toward the sub as their high-speed approach began and, with the leading ship closed to 1000-1500 yards, the sub fired another pair of tin-fish as the target made a turn and presented a good angle for the attack.

After firing, *Salmon* started her dive and two hits were heard and seen. Then the sound operator reported hearing one set of screws astern—running at high speed and then stopping. SS 182's first offensive contact with the enemy had apparently been successful.

One hour of silence passed before the skipper dared bring the sub to the surface. Within minutes after com-

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From *History of* USS *Salmon (SS 182)* made available through the courtesy of Office of Naval Records and History, Ships' Histories Section, Navy Department, Washington, D. C.

SALMON ACCOUNTED for many such sinkings as she wrote her name in the annals of WW II history.

ing up, the sound watch reported screws turning up off the port quarter. After peering into the haze for several more minutes, the lookout sighted a ship on a collision course at 1000 yards and *Salmon* made a quick dive as the enemy passed almost directly above.

Seven separate depth-charge attacks followed and evasive tactics continued throughout the day. Finally, at 1630, all seemed to be serene and clear and *Salmon* broke surface. No ships were in sight and shortly after dark, the sub commenced a needed battery charge.

Less than a week later, while charging batteries on the surface, there suddenly appeared a large number of ships on both bows running a parallel and opposite course. *Salmon* immediately changed to battery power and charged in with decks practically awash. The firing set-up called for a four-shot brace from the bow tube. However, just as she launched the torpedoes, a heavy depth-charge attack came. Two of the charges were very close aboard and caused superficial damage in addition to shaking up all hands. Because of the noise of the depth charges, no hits could be identified as such and *Salmon,* at the moment, was more interested in getting out. Three hours later all was clear and *Salmon* surfaced for another battery charge.

Salmon's first patrol, typical of so many, lasted for 57 days. By the time she pulled alongside the tanker USS *Trinity* (AO 13) in Java, she had suffered considerable superficial damage from depth charges at one time or another, and was badly in need of supplies and refitting. It took an effort of memory to recall when the ventilating system had last worked and, perhaps more important, the last days of the patrol were conducted without a drop of coffee on board.

A WEEK LATER she was underway again. After five days at sea she had an inconclusive brush with a group of combatant ships and merchantmen and, although there was an exchange of torpedoes and depth charges, no kills were recorded.

Although three other attacks were made during the second patrol it was not until the third that *Salmon* could irrefutably claim a kill—an 11,000-ton repair ship. After tracking the vessel for an hour, *Salmon* gained her position and fired a spread of four torpedoes. Four hits resulted. The sub went to 200 feet and rigged for depth-charge attack from the two escorting ships. After a brief attack from the destroyers, a muffled explosion was picked up and loud water agitations were heard in the bearing of the target.

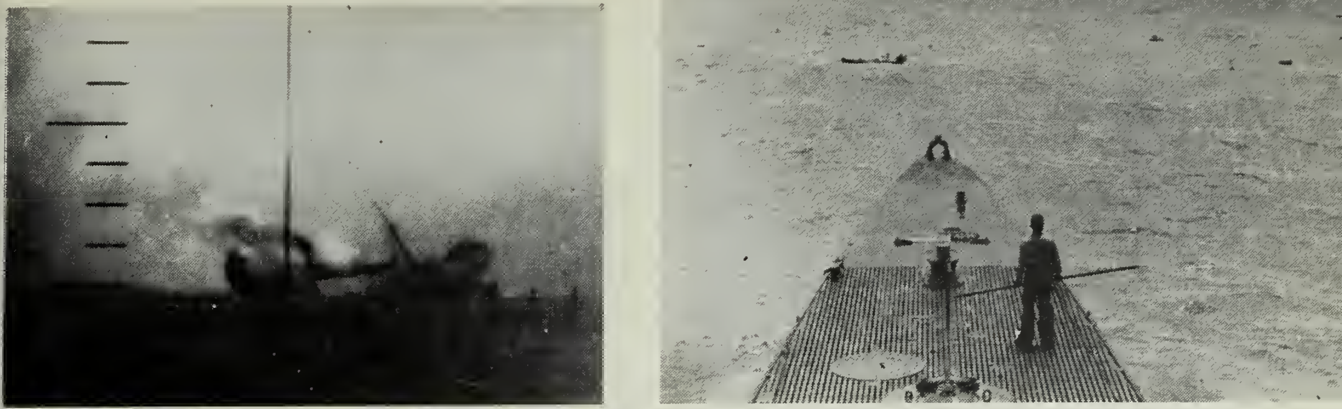
Three days later, at about sunset, smoke was sighted on the horizon and the sub commenced tracking at periscope depth. Fifty-five minutes later *Salmon* fired a set of three missiles and two timed hits were observed. The boat stood by for almost three hours before the target slipped under the surface. This vessel was later found to be the 482-ton passenger cargo ship *Ganges Maru.*

From Balabac Strait and the Southern Palawan Passage, Manila Bay and Luzon Point, Salmon *prowled the seas. After a year of active duty she earned an overhaul period at Pearl and, as the war had now progressed considerably, she operated closer and closer to Japan. The following is typical of this period.*

AT THE END of routine refit and training, *Salmon* commenced her Seventh War Patrol on 17 Jul 1943 as she departed Midway en route for her assigned area of patrol in the North Pacific and in the Okhotsk Sea. By 25 July the submarine had reached the area of patrol. The fog was extremely dense, limiting visibility to about 1000 yards.

On 7 August *Salmon* made a contact and was able to

SALMON RUN—Surfaced *USS Salmon* (SS 182) cuts through Pacific waters as she moves out on patrol.



AFTER ENEMY ship goes down, crew members bring their sub to the surface to check the sea for survivors.

turn this one into an attack. Upon gaining her position, she fired four torpedoes from a range of 1700 yards. After firing, the radar operator tried to bring in the target. Just as the pip appeared, three of *Salmon's* torpedoes ripped into the Japanese ship. It sank quickly. *Salmon* could not locate the target 30 minutes after firing.

After a day of "rest" another contact was picked up on the morning of 10 August. Investigation proved it to be a well-deck freighter of about 4000 tons. After closing to a range of 1000 yards *Salmon* fired a spread of three torpedoes. One missed ahead, the second hit amidships and was seen to bounce off (a dud) and the third missile was not observed.

SS 182 fired the fourth bow torpedo, but the ship, upon sighting the wake, swung sharply and caused the shot to miss. This change of course gave the submarine a view from her stern forward and it was observed that the vessel was listing heavily and settling aft. From these appearances, the third torpedo had hit the ship without exploding and ripped through the hull plates.

The crew of the enemy ship was seen to be loading into lifeboats with the davits swung outward and the vessel was being steered on a course for beaching. *Salmon* attempted to prevent the beaching maneuver by firing another spread of torpedoes. All but one missed and a hit was scored just at the bow. The explosion carried a geyser high into the air and part of the forecastle sailed up about 150 feet. The ship sank in 25 minutes.

Two days later, after waiting out a spell of rain and fog, another contact was made. The attack was unsuccessful because of torpedo failure for reasons unknown. At the end of this attack *Salmon* headed for home as she had no more torpedoes.

Salmon's *eleventh war patrol commenced more than a year later when she cleared Pearl as a unit of the wolf pack comprised of submarines* Trigger, Silversides *and* Sterlet.

IN THE AREA of Nansei Shoto the pack made contact with a large tanker escorted by four frigate-type ships. During the day the target was lost twice and finally in the late afternoon, when *Salmon* was several miles off, she saw an explosion alongside the tanker. This proved to be a result of *Trigger's* attack which left the victim dead in the water and drifting with the wind.

Two hours later SS 182 pulled into position and fired a spread of four torpedoes with two hits resulting. (*Sterlet's* torpedo caused the actual sinking and credit was divided equally between the raiders.)

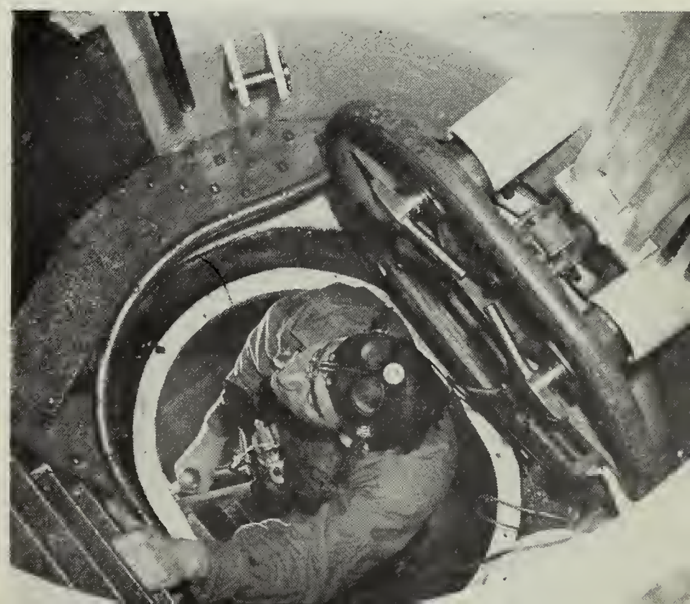
As SS 182 had made her run, the escorting vessels were closing from their position 1000 yards off and by the end of the torpedo run these A/S ships were well into firing position.

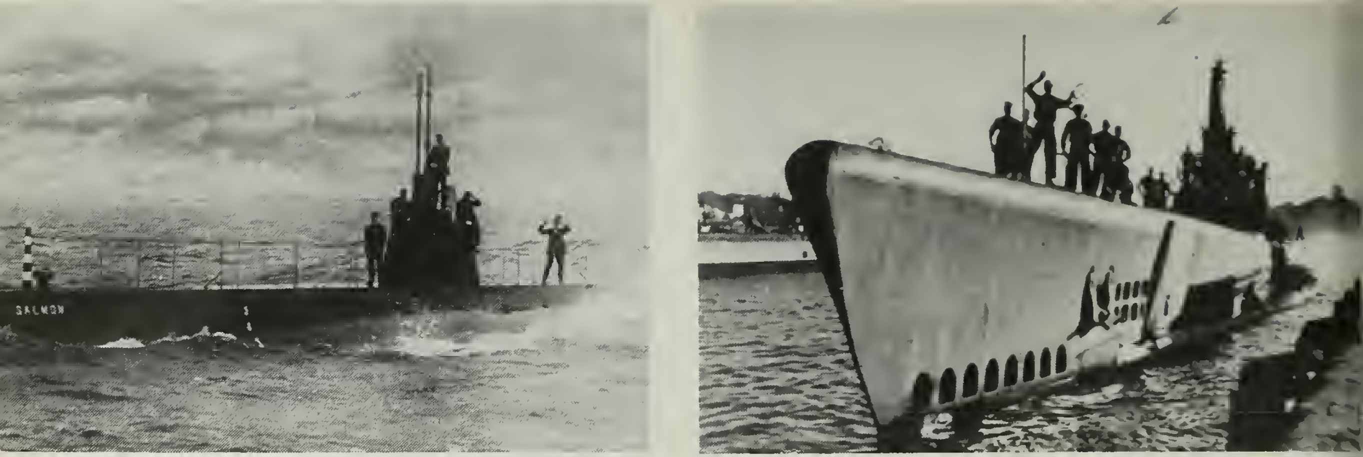
The firing lasted 11 minutes and, by this time, the Japanese escort vessels had picked up *Salmon*. Depth charging began. First, there were four depth-charge patterns perfectly laid. *Salmon's* crew were knocked to their knees from the explosions which shook the boat from bow to stern, cutting off the auxiliary power. The ship was without lights. Several more close misses shattered the glass on the clocks, gauges and other fixtures and the flying debris made life hazardous.

Down, down, deeper and deeper—well below 200 feet—went the stricken submarine. The sailors clung to whatever was nearby to keep their balance but again and again the depth charges would batter them against the bulkheads or to their knees again.

During the next 17 minutes, *Salmon* and her crew outlasted 30 depth charges and went to extreme depths—depths earlier considered fatal for a submarine of *Salmon's* type. In those 17 minutes, *Salmon* received

WEARING OXYGEN GEAR seaman climbs up through escape hatch during practice rescue drill while at sea.





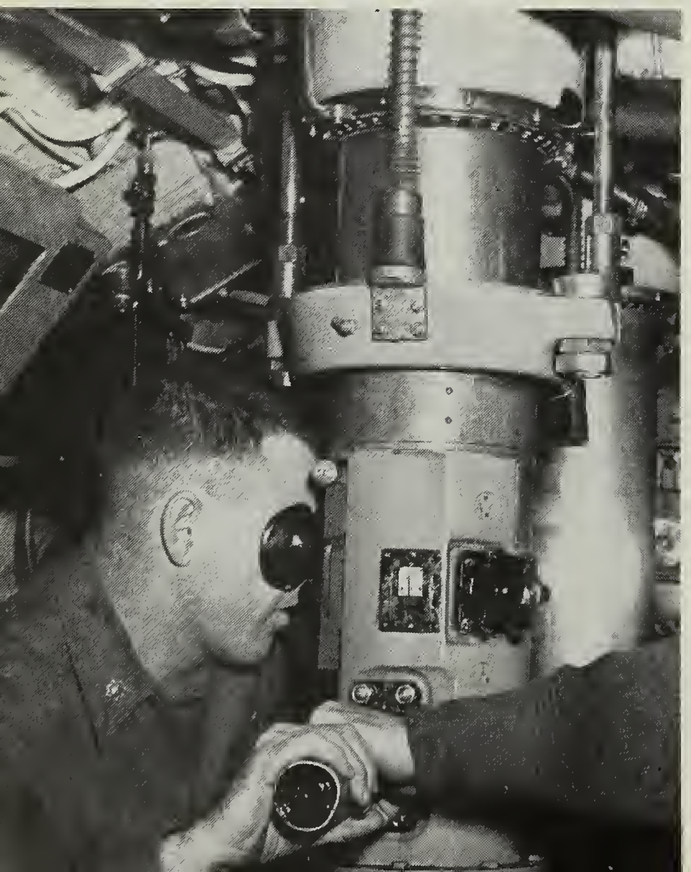
EARLY SALMON skims through choppy water with crew standing by. *Right:* Sub pulls into port as line is tossed ashore.

possibly the worst beating ever inflicted on an American submarine—which survived—during the entire war.

The skipper finally managed to check his descent by pushing his motors to emergency speed and by using a 20-degree up-angle. Meanwhile, the mangled hull fittings began to leak profusely in the engineroom and water poured in from the gaps. The conning tower bilges were rapidly filling up. The water had already reached the deck plates in most parts of the boat. The compartments were unbearably hot. The escaping fumes from the rapidly weakening batteries were choking the crew, and the stagnant air made breathing difficult. Both diving planes were out of order, which meant that once *Salmon* surfaced, she would no longer be able to dive.

The crew managed to bring the ship up to 150 feet, but when an attempt was made to level off and reduce speed, *Salmon* dropped like a rock.

'FIRE ONE' — Submarine Skipper bears down on target to determine range before giving order to release 'fish.'



At this point, the skipper faced a vital decision. Should he allow his boat to settle deeper and deeper or, in his crippled condition, should he surface and attempt to fight it out with the four enemy anti-sub craft waiting for him?

There wasn't much choice. He drew a deep breath and at 2030, the captain passed the word for *Salmon* to surface.

She was really not in much shape to be an active combatant. She had a 15-degree list to starboard and her decks were awash. She was crippled, tired and without power. Some of her crew were still unconscious and all were exhausted.

Salmon's lookouts sighted the enemy, an escort at an estimated range of 7000 yards but, for the moment, she was in no position to do much about it. Some 30 minutes elapsed before the Japanese PC detected *Salmon* lying helpless on the surface—but it had been time enough to get two engines in operation and the low pressure blowers started. Floods and emergency vents were closed. Then, by the time the enemy spotted *Salmon* in its searchlight, power steering was back in commission, the stern diving planes were fixed sufficiently to get them on zero, the auxiliary gyro compass was running again and bilges were pumped.

At this stage, the situation grew confused to the point of comedy—of sorts. To this day, no one knows whether the enemy's lookout conveniently developed a bad case of eye trouble or whether the commanding officer decided to play safe and wait for reinforcements. The fact remains that, for 30 precious minutes the enemy took no action, and then finally advanced with great caution. While still at a discreet distance, it opened fire with its three-inchers and 37mm. None of his feeble efforts came close to *Salmon*.

No sooner had the escort ship opened fire than her companions, some five miles to the southward, also began firing. There was only one target available—the gun flashes of the first PC. Not to be outdone in ineptness, Skipper No. 1 briefly returned the fire of his companions, then returned to the task for which he obviously had no taste—the conquest of *Salmon*.

He decided to use the cat and mouse technique. The escort would run up on the port quarter and sheer out, bringing her after guns to bear. She would fire a few shots before she was out of range, then would pause to see what effect her daring had on *Salmon*. Then the process would be repeated.

Unfortunately, *Salmon* was not in a position to reply effectively. Her telescope sights had been knocked out by the depth charges and, in spite of all the will in the world, her gun crew could do no better than a few close splashes with their open sights.

The enemy continued to force *Salmon* in large circles. Time after time occasional shells would burst close aboard the submarine, often splashing water on the bridge and decks.

By midnight three other escorts had joined the first Japanese ship in a line to the south of *Salmon* at a distance of some 4000 to 8000 yards. The first escort vessel was to the northwest of the sub when it made its belated effort to get close.

WHEN THE ENEMY now moved within firing range, *Salmon* broke all the rules by taking the offensive. Instead of firing her guns from a sitting position she turned directly toward the astonished patrol craft as if to ram and, in doing so, *Salmon* completely reversed the situation. The escort's guns were rendered useless because the gun crews were unable to point their weapons down to the submarine's level. The enemy was caught completely off guard.

Taking best advantage of his opportunity, *Salmon's* skipper had all his guns trained to starboard, ordered hard left rudder, and passed the enemy at about 50 yards on opposite courses. The sub's gun crew raked the patrol craft from one end to the other, killing most of the enemy on deck. One four-inch shell found its way into the bridge structure and the small caliber guns sprayed all areas impartially. The escort opened with all its guns momentarily but was soon silenced. Two more salvos from *Salmon's* large deck gun hit the after part of the escort.

By this time, the second PC crossed astern of the submarine, made several futile passes but became discouraged when a few four-inch shells came close to her stern.

Stubborn *Salmon* was greatly outnumbered and outgunned, but she continued to ward off the anti-submarine unit for the next two hours. The opposition then dropped out of sight in a rain squall. (It was later learned that the escorts picked up contacts on their sound gear—presumably a part of the wolf pack consisting of *Sterlet*, *Trigger* and *Silversides*—and went away from that dangerous area.)

The battle had resulted in the ultimate sinking of one escort and another seriously damaged, while the two remaining vessels escaped. It took place within less than one hundred miles of the Japanese mainland.

The following day, at her request, the other three members of the pack formed a protective group around the crippled submarine as course was set for a friendly port. The escort was reinforced by aircraft on the second day and on 2 Nov 1944, *Salmon* arrived at Saipan and moored safe alongside USS *Fulton* (PG 49).

ON 26 JAN SS 182 stood out from San Francisco Bay in company with the submarine *Redfish* and an escort. After passing through the Panama Canal from 6-8 February, *Salmon* arrived at Portsmouth, New Hampshire, on 17 February.

Tentative plans for the veteran included a yard period and then assignment as a training vessel in the Atlantic Fleet. However, the end of the war resulted in the abandonment of all plans and on 24 Sep 1945, the seven year-old submarine USS *Salmon* was decommissioned and turned over to proper authorities for disposal and scrapping.

The Presidential Unit Citation was awarded *Salmon* "for extraordinary heroism against enemy Japanese surface vessels during a war patrol of the underseas craft in restricted waters of the Pacific." The text of the Citation reads:

> *"For extraordinary heroism in action against enemy Japanese surface vessels during a war patrol in restricted waters of the Pacific. Covering her assigned area with relentless determination, the* USS Salmon *contacted a large hostile tanker, boldy made her approach in defiance of four vigilant escort ships cruising within 1000 yards of the target and launched her torpedoes to score direct and damaging hits. Damaged by terrific depth charging,* Salmon *daringly battle-surfaced to effect emergency repairs and fight it out. Firing only when accurate hits were assured, she succeeded in keeping out of effective range of hostile guns and confused the enemy by her evasive tactics until the escort warily closed to ram. In a brilliantly executed surprise attack, she charged her opponent with all available speed and opened fire with every gun aboard to rake the target fore and aft and destroy most of the Japanese topside. Still maintaining her fire, she entered a rain squall to repair her damage before attempting the long run home on the surface. Although crippled and highly vulnerable,* Salmon *had responded gallantly to the skilled handling of her stout-hearted and indomitable officers and men in turning potential defeat into victory."*

OFFICER OF THE DECK scans horizon as daring sub cautiously makes its way through enemy waters.

TAFFRAIL TALK

If you are included among the acute observers who form a large part of our reading (as distinguished from looking) public, you'll note a few pages are missing. Sixteen, to be exact. No need to hit the panic button. We're hoarding our energies (and paper budget) for the May issue, which will be a whopping 80-pager, describing your current rights and benefits. They make an impressive list.

★ ★ ★

From time to time in these columns we have commented on the ancient and noble art of bottle tossing. Now, we've discovered they do things differently and on a bigger scale in the Canadian Navy. At first, when our observer noted case after case of bottles with the familiar long neck being loaded aboard *HMCS Oshawa*, he came to the conclusion that a party was in the offing. Further investigation, however, revealed that the bottles—all 4000—were empty. We didn't ask how he learned.

With diminished enthusiasm he found that *Oshawa* had been equipped and assigned by the Navy for oceanographic work. The bottles were to be chucked overboard from time to time to supplement the ship's more expensive instruments in the study of ocean currents.

★ ★ ★

Our Editor-in-Charge-of-Confused-Statistics breathlessly arrived one minute before deadline with the usual priceless announcement. Seems that he had been investigating the preferences of USS *Moale* (DD 693) personnel and discovered that, during their recent Med tour they had:

Drunk 96,840 cups of coffee which, combined with the 34,117 soft drinks and miscellaneous tea and cocoa, constituted enough liquid to float *Moale* and provide plenty of room for a turnaround; smoked 812,400 cigarettes which, says our EICOCS, if laid end to end from Gibraltar, would stretch to Norfolk, curve up to Washington, D. C., with an ash somewhere around Baltimore. If you don't care for the Baltimore, Washington, Norfolk brand, your cigarette would extend approximately 3846.59 miles in whatever direction you prefer. King size, we presume.

At deadline, the EICOCS was heard to mumble something about 3770 bars of soap.

★ ★ ★

Peeking over the shoulder of the Chief of Information, we noted the phrases "high editorial standards and effective layout of recent issues," then discovered he was writing a memo concerning "The Hoist," San Diego, Calif. Naval Training Center newspaper. "The Hoist is considered one of the best of its type reviewed by this Office," says Chinfo.

We think so, too.

The All Hands Staff

The United States Navy

Guardian of Our Country

The United States Navy is responsible for maintaining control of the sea and is a ready force on watch at home and overseas, capable of strong action to preserve the peace or of instant offensive action to win in war.

It is upon the maintenance of this control that our country's glorious future depends. The United States Navy exists to make it so.

We Serve with Honor

Tradition, valor and victory are the Navy's heritage from the past. To these may be added dedication, discipline and vigilance as the watchwords of the present and future.

At home or on distant stations, we serve with pride, confident in the respect of our country, our shipmates, and our families.

Our responsibilities sober us; our adversities strengthen us.

Service to God and Country is our special privilege. We serve with honor.

The Future of the Navy

The Navy will always employ new weapons, new techniques and greater power to protect and defend the United States on the sea, under the sea, and in the air.

Now and in the future, control of the sea gives the United States her greatest advantage for the maintenance of peace and for victory in war. Mobility, surprise, dispersal and offensive power are the keynotes of the new Navy. The roots of the Navy lie in a strong belief in the future, in continued dedication to our tasks, and in reflection on our heritage from the past. Never have our opportunities and our responsibilities been greater.

ALL HANDS the Bureau of Naval Personnel Information Bulletin, with approval of the Bureau of the Budget on 23 June 1955, is published monthly by the Bureau of Naval Personnel for the information and interest of the naval service as a whole. Opinions expressed are not necessarily those of the Navy Department. Reference to regulations, orders and directives is for information only and does not by publication herein constitute authority for action. All original material may be reprinted as desired if proper credit is given ALL HANDS. Original articles of general interest may be forwarded to the Editor.

DISTRIBUTION: By Section B-3203 of the Bureau of Naval Personnel Manual, the Bureau directs that appropriate steps be taken to insure that all hands have quick and convenient access to this magazine, and indicates that distribution should be effected on the basis of one copy for each 10 officers and enlisted personnel to accomplish the purpose of the magazine.

The Bureau invites requests for additional copies as necessary to comply with the basic directive. This magazine is intended for all hands and commanding officers should take necessary steps to make it available accordingly.

The Bureau should be kept informed of changes in the number of copies required.

The Bureau should also be advised if the full number of copies is not received regularly.

Normally copies for Navy activities are distributed only to those on the Standard Navy Distribution List in the expectation that such activities will make further distribution as necessary; where special circumstances warrant sending direct to sub-activities the Bureau should be informed.

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PERSONAL COPIES: This magazine is for sale by Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. 20 cents per copy; subscription price $2.25 a year, domestic (including FPO and APO addresses for overseas mail); $3.00, foreign. Remittances should be made direct to the Superintendent of Documents. Subscriptions are accepted for one year only.

• AT RIGHT: LOOKING UP — USS Hamul (AD 20) rides the tide secured to mooring buoy in Long Beach harbor while keeping her brood of DDs shipshape.

D20

YOUR CHANCE TO TRAVEL

ALL HANDS

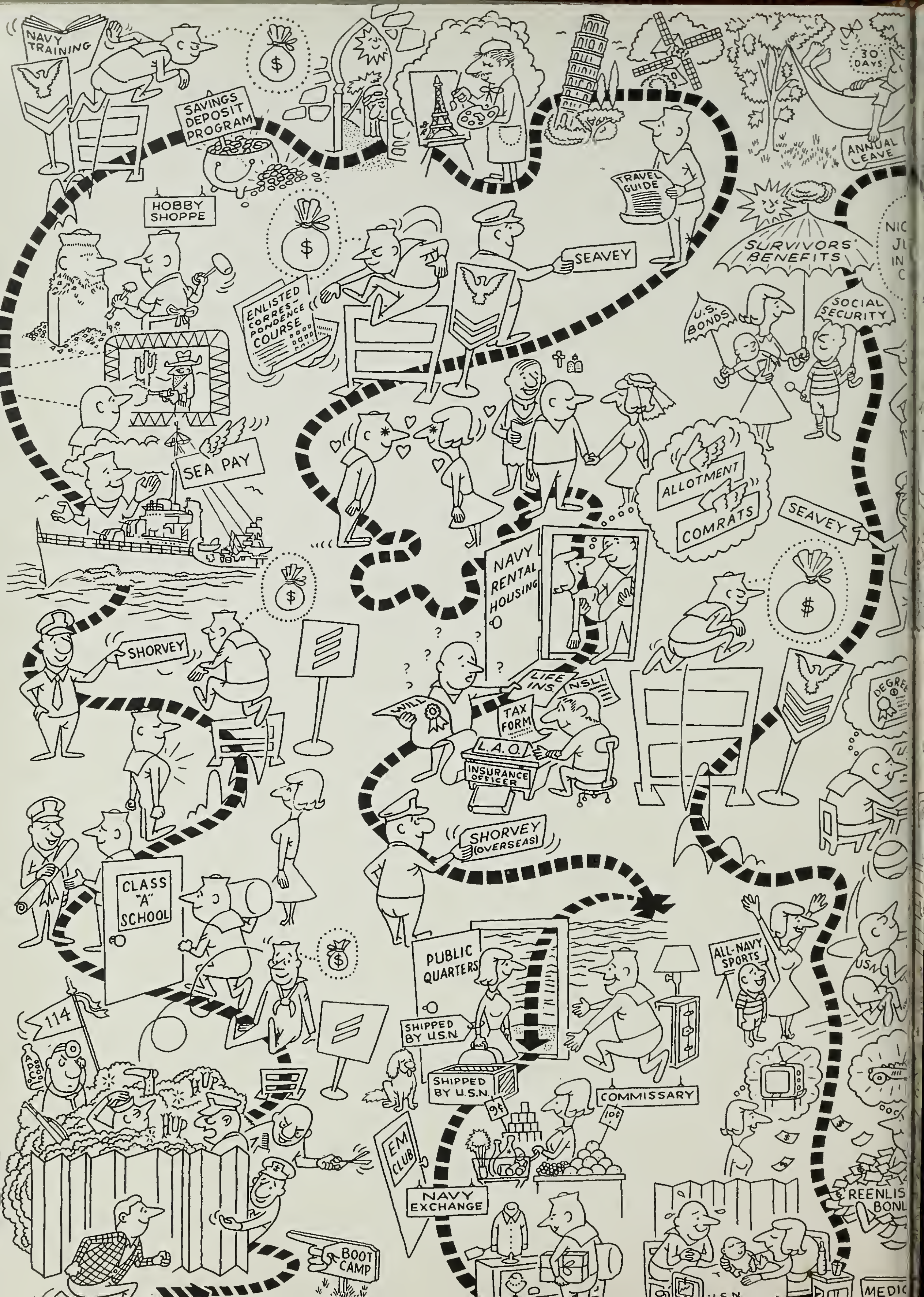
THE BUREAU OF NAVAL PERSONNEL INFORMATION BULLETIN

SPECIAL ISSUE

rights and benefits

of navymen and their dependents

MAY 1957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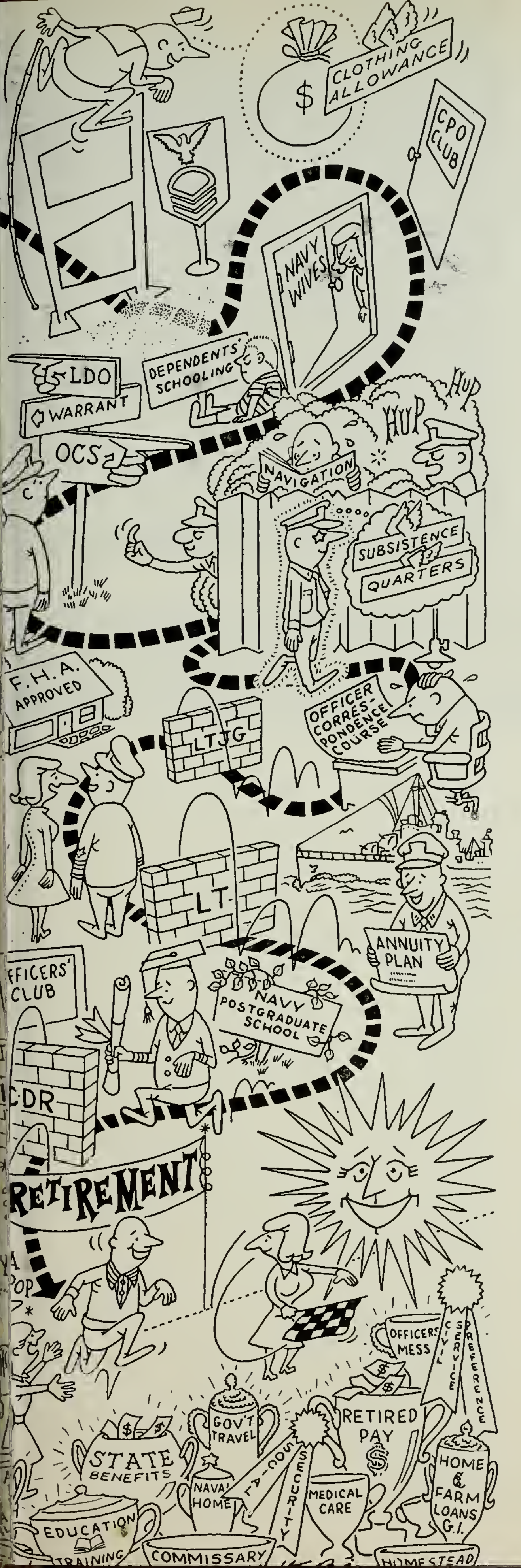

ALL HANDS

THE BUREAU OF NAVAL PERSONNEL INFORMATION BULLETIN

MAY 1957 Nav-Pers-O NUMBER 484

VICE ADMIRAL JAMES L. HOLLOWAY, Jr., USN
The Chief of Naval Personnel
REAR ADMIRAL K. CRAIG, USN
The Deputy Chief of Naval Personnel
CAPTAIN O. D. FINNIGAN, Jr., USN
Assistant Chief for Morale Services

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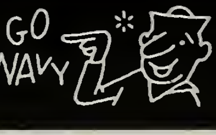
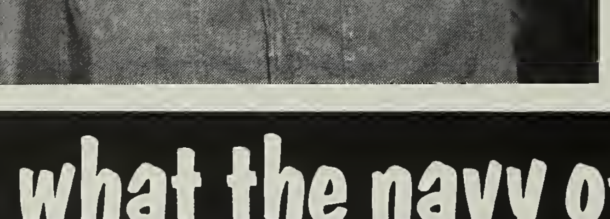
what the navy offers you



Whether you're fresh out of boot camp, or a well seasoned old salt, or the skipper of a ship, you will have a mutual interest when it comes to pay. To the new recruit, with a pay check of $78 a month, the situation may look pretty grim. But the picture changes rapidly. By the time you make Chief in, let us say, 12 to 14 years, you will be receiving an income which enables you to live more than comfortably.

At that, the actual cash you receive each month reflects only a portion of your total earnings. Considering the ample allowances you receive each month in addition to your basic pay, Navy pay scales are high.



You're furnished *food* and *quarters, dental* and *medical care,* as well as an ample *uniform allowance.* If you're married, you also receive a *dependents' quarters allowance* and your family is entitled to costly *survivors' benefits.* Your Navy *retirement pay* represents a considerable investment. All these combine to make the U. S. Navyman the highest paid sailor in the world.

Keeping these additional benefits in mind let's take a look at the current pay instructions and see where you stand.

The Career Compensation Act of 1949 is the foundation of the Navy's pay instructions. This Act, together with the Dependents Assistance Act of 1950 and the Career Incentive Act of 1955, which amend and supplement it, describes the pay structure, the pay rates and, in some cases, the conditions of entitlement to pay and allowances for all of the armed forces.

Here's a summary of the factors you must take into consideration to figure your gross and net income—including any additions of special pay and allowances if applicable to your situation.

Your Navy Pay

- **Basic Pay**—This term incorporates what was formerly known to old timers as "base pay" plus "longevity." You'll still hear these phrases used occasionally, but both terms were officially discontinued with the passage of the Career Compensation Act. Your active duty basic pay is determined by your pay grade and the total number of years of active and inactive military service. The Career Compensation Act of 1949 established the system of "*periodic pay increases,*" replacing longevity. Under this law, basic pay is increased every two years, up to 18 years of service, and thereafter every four years. Every Navyman, as the chart on page 8 will show, is entitled to the periodic pay increases unless he stays too long in the same grade. Under the present pay act, periodic pay increases amount to approximately $15 per month for officers and $7.50 per month for enlisted personnel for each two-year period of service.

- **Cumulative Years of Service**—In figuring your basic pay (including your periodic pay increases), you should count both active and inactive duty in the Navy and Naval Reserve. If you previously served in another branch of the armed services—Army, Air Force, Marine Corps, National Guard, Public Health Service, or their Reserve components—you should ask the disbursing officer at your activity if your service is creditable for pay increases.

Cumulative years of service do not have to be con-

secutive to count for periodic pay increases. As an example, let's presume that you joined the Navy in 1942 and were discharged in 1946. During the next two years you had no connection whatever with the Navy until you joined the Naval Reserve in 1948. While in the Reserve you remained on inactive duty until ordered to active duty during the Korean conflict in 1950. In figuring your basic pay, you would count the time you spent on both active duty and inactive duty in the Naval Reserve.

Special Pay

Special pay is added compensation you receive each month for performing certain duties. It is in addition to your basic or any hazardous pay you receive each month. You're entitled to special pay for sea and foreign duty, and diving duty when so detailed and assigned. The added compensation paid monthly to physicians and dentists also comes under the special pay category.

- ***Sea and Foreign Duty Pay***—This form of special pay is payable only to enlisted personnel. Sea and foreign duty pay is figured on a sliding scale according to your rate. It varies from a minimum of $8.00 per month for a seaman apprentice or seaman recruit up to $22.50 per month for a chief petty officer. (See chart on page 8.)

- ***Diving Pay***—Both officers and enlisted men who are employed as divers are entitled to special diving pay in addition to their basic pay.

Officers are paid at the rate of $5.50 for each hour or fraction of an hour that they are actually employed in salvage or repair operations in depths over 90 feet, or less than 90 feet when the officer in charge of the

salvage or repair operations finds that extraordinary hazardous conditions exist.

Enlisted men designated as divers who are detailed or assigned to diving duty receive diving pay at the following rates: Master Diver—$23; Diver First Class—$18; Salvage Diver—$15; and Diver Second Class—$13.

In addition to these flat rates, enlisted men are paid $5.50 for each hour or fraction of an hour they are employed as divers in actual salvage or repair operations in depth over 90 feet, or less than 90 feet when the officer in charge of the salvage or repair operations finds that extraordinary hazardous conditions exist, and five cents per foot of total depth for dives over 120 feet or in equivalent pressure.

- **Physicians and Dentists Pay**—Medical officers who have completed their internship are entitled to special physicians and dentists pay. As long as they remain on active duty, they receive an additional $100 per month until they complete two full years of active service; then $150 until they complete six years; then $200 per month through 10 years and $250 monthly thereafter.

Hazardous Duty, Incentive Pay

Incentive pay is additional pay for the performance of hazardous duty required by competent orders and consists of the following categories: *aviation pay, submarine duty, parachute duty, leprosarium duty, demolition duty, duty at the Navy Deep Sea Diving School* or the *Navy Experimental Diving Unit*, duty at a *submarine escape training tank*, duty as *low-pressure chamber inside observer*, duty as human *acceleration or deceleration experimental subject*, duty involving the use of helium-oxygen for a breathing mixture in the execution of *deep sea diving*, and *combat pay*.

Officers receive $110 per month while enlisted personnel receive $55 for all types of hazardous duty pay except for aviation and submarine duty.

Hazardous duty pay for both officers and enlisted personnel engaged in flying duty or serving aboard a submarine is determined by pay grade and length of service. (See chart on page 8.)

- **Combat Pay**—Personnel serving with or on board a combat unit are entitled to receive combat pay at the monthly rate of $45. It is payable in addition to sea and foreign duty pay but not in addition to other forms of special or hazardous duty pay. In the event you are serving in a combat zone and are entitled to special or other incentive pay for hazardous duty, you will receive either the combat or other special or hazardous duty (whichever is greater) but not both.

Allowances

An allowance is a contribution of money or its equivalent "in kind" to help you meet some of the expenses you may incur because you are a member of the naval service. There are three basic types of allowances; subsistence, clothing allowance and quarters allowance.

- **Subsistence Allowance**—An officer is entitled to an allowance for subsistence at the rate of $47.88 per month without regard to rank or dependency status. All officers, whether on board ship or ashore, whether married or single, draw a subsistence allowance and pay their own mess bills.

The subsistence allowance for enlisted personnel, commonly call "ComRats" (commuted rations) is usually limited to married individuals who are living off the base with their families and are being granted the privilege of messing away from their naval activity. The current amount for ComRats is $1.00 per day.

Generally speaking, if you are assigned, say, to temporary shore patrol duty, whether you're single or married, you are entitled to draw $2.57 per day subsistence, provided no government messing facilities are available. However, because of the many and varied conditions of those assignments such as geographical area, status in respect to allowances, types of duty, and so on, no standard sum can be given here. The orders issued you will usually indicate the type of reimbursement you are authorized to draw.

- **Clothing Allowances**

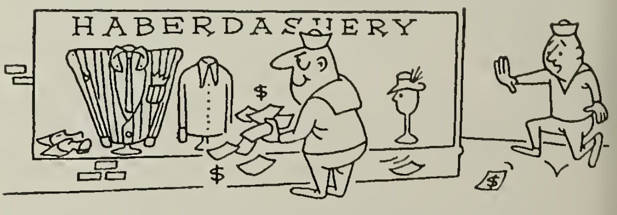
When you first enter the Navy, and under certain conditions upon reenlistment or recall to active duty, you will receive an initial clothing allowance. Depending upon your duty assignment, you may be further eligible to receive a special or civilian clothing allowance. Once you have received an initial or special clothing allowance, you will receive a maintenance allowance monthly thereafter.

The rates and conditions under which you are entitled to initial and special clothing allowances are described in paragraphs (2) and (3) of subsection (4), Chapter 4, Volume IV, *NavCompt Manual.*

Your monthly maintenance clothing monetary allowance is payable in relationship to your initial clothing allowance. It's automatically included in your pay each month. Commonly called "clothing allowance," this maintenance allowance is divided into two categories—basic and standard. The regulations regarding payment differ according to your pay grade.

- If you're a first class petty officer (E-6) or below, you will begin to draw your basic clothing allowance six months after receiving your initial allowance, or upon completion of six months' active duty. The current rate for monthly basic maintenance for E-6s and below is $4.20.

When you complete three years of active duty you then begin to draw the standard clothing allowance which amounts to $6.00 per month.



- In the event you are a chief petty officer (E-7) you have been drawing a monthly basic uniform allowance ($6.00 per month) since the day after you put on your hat. When you have served three years as a

CPO, you then begin to draw the standard maintenance allowance which is $7.20 per month.

- An enlisted man on active duty who is promoted to chief petty officer is entitled to $300 clothing allowance. If you are an enlisted man and are promoted to warrant or commissioned rank you may be entitled to an initial uniform allowance. However, the amount of such allowance varies according to the case involved. Officers who receive their commissions through the Naval Academy are not given a clothing allowance since they already have the required clothing.

- Reserve officers upon first reporting to active duty for more than 90 days are, under certain conditions, entitled to credit of an initial uniform allowance up to $200. An additional active duty uniform allowance of $100 is payable to certain Naval Reserve officers for each time they enter or reenter on active duty or active duty for training longer then 90 days. Naval Reserve officers are also entitled to a uniform maintenance allowance of $50 for the purchase of required uniforms and equipment upon completion, after 9 Jul 1952, of each period of four years of satisfactory federal service as an officer in an active status in the Naval Reserve. This period must, however, include at least 28 days of active duty or active duty for training performed after the date of entitlement to his last previous uniform allowance.

- **Quarters Allowance**—In addition to the pay and allowances described earlier, you may, if you are a family man, also be eligible to receive a Basic Allowance for Quarters.

The Basic Allowance for Quarters (BAQ) is intended to provide rental money for all naval personnel—and their dependents—who are not assigned to government quarters or housing facilities under jurisdiction of the Navy.

- *Officers Quarters Allowances*—An officer without dependents receives a quarters allowances except when government quarters are available. Consequently, if he is assigned to duty at sea, or to a station where Bachelor Officer Quarters (BOQ) are available, he will not receive a quarters allowance.

An officer with dependents is allowed a quarters allowance regardless of whether he is serving ashore, at sea, or overseas, unless government quarters have been provided for him and his dependents.

- *Enlisted Basic Allowance for Quarters*—BAQ for enlisted men without dependents is now $51.30 per month. However, if you have no dependents, you are entitled to such BAQ only when government quarters are not available, such as on recruiting duty or other independent duty.

If you do have dependents, regardless of your pay grade, you are entitled to a monthly BAQ under the provisions of the Dependents Assistance Act. You are entitled to this allowance regardless of whether you're serving ashore, at sea, or overseas. It is credited directly to your pay each month unless your dependents have been provided government quarters by the Navy. In such case, since government quarters are provided, you do not draw BAQ.

If you have dependents, your BAQ varies according to your pay grade and the number of legal dependents (up to three) you have.

The table on page 8 shows the Basic Allowance for Quarters—and the additional minimum contribution required from you according to pay grades.

In order to qualify for this allowance, you must register (have entered on your pay record) an allotment of your pay which is equal to the rate of BAQ you are

entitled to receive from, and paid for by, the Navy, plus an additional specified contribution taken from your basic pay. The total of these two sums—one provided free by the Navy, the other sum contributed by you—is the amount of money sent by the Navy directly to your wife or other dependents.

How to Apply for an Allotment

An allotment is not granted automatically. That is, you just can't inform the personnel officer that you are married and then expect your wife to receive an allotment check. You must make an application and register an allotment, and in doing so, there are certain conditions which you and your dependents must fulfill.

You'll be given an application which you must fill out, giving identifying information concerning yourself, your dependents' relationship, and their dependency upon you.

If there is any doubt in the mind of the disbursing officer as to the eligibility of your dependents, he may withhold credit and, consequently, you will not be able to register the "Q" allotment for your dependents. If this is your case, then—pending a determination as to your dependents' eligibility—you may register a "D" allotment (a "D" allotment is one in which the entire contribution is made by yourself—there is no cost to the government) from your pay for these dependents.

In the case of your parents or children over 21 years of age, since credit for BAQ cannot be given until the application is approved, a voluntary allotment must be registered. The amount of this allotment must be at least equal to the minimum required contribution you must make for a "Q" allotment.

There are certain conditions under which exceptions are made to the requirement that an allotment must be registered before you get BAQ credit. They are:

- The month in which you are assigned to quarters for your dependents and the month in which such assignments terminate. BAQ is not paid when government quarters are provided your dependents.
- The month in which you are discharged, providing you do not immediately reenlist.
- The month in which you enter on active duty in a pay status if the allotment is effective for the following month.
- The month in which you are released from active duty.
- The month in which the required degree of dependency ceases.
- The month in which dependency commences providing you have an allotment effective from the following month.
- In the event of your death, the month in which death occurs.

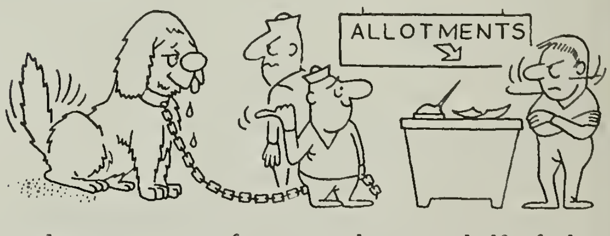
These Dependents Are Eligible

For the purpose of determining entitlement to Basic Allowance for Quarters, the term "dependent" is specifically limited to certain individuals under certain contions. These dependents are:

- A lawful wife. A marriage is lawful only if both parties are eligible to marry on the date of marriage.

Many states have divorce decrees which require a second final decree or a waiting period before the divorce is final. Some divorce decrees require a waiting period before remarriage is permitted either within the state where the decree is obtained or outside the state. Therefore, you should be very careful that you do not remarry after divorce until you are absolutely sure that your divorce has effectively dissolved your previous marriage. (The above applies to your wife's previous marriage also.)

- Unmarried legitimate children under 21 years of age. The dependency of such a child (under 21 years of age) of an enlisted Navyman is presumed and does not have to be proven. If you are divorced, although there may be nothing in your divorce decree stating as much, you as a Navyman are obligated to support your minor children. (Since the "Q" allotment requirement does not apply to officers, a divorced officer must prove that he is supporting his minor children.)
- Legitimate stepchildren who are unmarried and under 21 years of age. These children must be in fact dependent upon you for a substantial portion of their support.
- Adopted children who are unmarried and under 21 years of age. These children become eligible dependents only when appropriate action has been taken by a civil court of competent jurisdiction to permit adoption by you. A legally adopted unmarried minor child of an enlisted Navyman must also be in fact dependent on the member for substantial support.
- Unmarried, legitimate children over 21 years of age who are incapable of self-support because of being mentally or physically incapacitated, and who are dependent upon you for more than one half of their support. It is not necessary that they be members of your household.
- Natural parents, provided they are actually dependent upon you for more than one half of their support. If the parent or parents claimed have an income from some other source, outside of charitable sources, such income being in excess of one half the expenses of such parent or parents, you will not be considered to have provided over one half support even though you have contributed to more than one half the expenses.



- Any person (including stepparents, former stepparents, or parents by adoption) who has acted as a parent for a continuous period of five years during your minority, provided such person is dependent upon you for at least over one half of his or her support.

Requirement of Your Dependents

As a rule, your wife will have no responsibilities in connection with your application for the "Q" allotment. However, if she has been previously married, she may be required to submit to the Family Allowance Activity at Cleveland evidence of the dissolution of her previous marriage, and, in certain cases, evidence of her marriage to you.

If your wife has children by previous marriage for whom you have applied for BAQ, she will be required to submit birth certificates for these children. In addition, an affidavit (known as "The Dependency Claim Form for Allowance for Adopted Children, Stepchildren, and Unmarried Legitimate Children over Twenty-one Years of Age"—NavPers 3004) will be sent to her by the Family Allowance Activity for completion. This affidavit concerns the amount of support, if any, being received by her for the support of these children from other sources.

If you have unmarried children over 21 years of age who are dependent upon you because of their mental or physical disability, the affidavit described above will be required from your wife or the custodian of such children. Further, it will be necessary for medical evidence of the disability of these children to be submitted.

If your wife needs help in obtaining any documents or information concerning them, she may ask the local Home Service Chapter of the American Red Cross, a local branch of the Navy Society, the local welfare agencies (private and public), the local Legal Aid Society, Clerks of Court, and the Bureau of Vital Statistics, for help. All documents submitted (with the *exception* of naturalization papers—see page 79) should be certified or photostatic copies. You should make it a point to keep the original of all documents. You may need them again.

Parents, or any person who stood in a similar relationship, have very definite requirements to meet. An affidavit known as the "Parent's Dependency Affidavit" (DD Form 137A) will be sent to them by the Bureau of Naval Personnel for completion. The Dependents Assistance Act specifically requires that the dependency of a father or mother must be determined on the basis of an affidavit submitted by them.

It is your responsibility to stress the importance of this form to your parents, as carelessness or inaccuracy in filling it out will result in delay and possibly may result in the disapproval of the application.

If your parents need any help in preparing any of these affidavits or forms, they, too, should seek the assistance of the same agencies and organizations as those suggested for your wife.

First Allotment Check

It is important that you remember that your family will not receive an allotment check immediately after application is made. An allotment check is not mailed until the end of the month for which it is payable.

Stated more directly, this means that if you apply for your wife's "Q" allotment say in March, the first contribution from your basic pay would be in April. And your wife's first allotment check would be mailed on or about 30 April.

Your parents' full "Q" allotment cannot be mailed until your application, your parents' affidavit, and other information which may be requested have been examined and a determination made that your parents are eligible dependents.

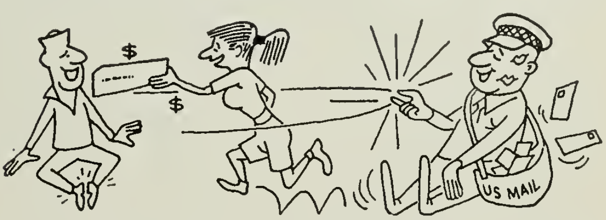
Generally the minimum time for the "Q" Allotments to wives and children and any "D" allotments to be paid would be five to eight weeks after application. The minimum time for the full "Q" allotment check to parents would be three months after application.

Cancellation

You or your dependents have the responsibility of notifying the disbursing officer, or the Family Allowance Activity in Cleveland, when entitlement to this allowance has ended as a result of change in status, as, for example:

- Upon death of a dependent, or when the required degree of dependency comes to an end, upon the divorce from wife or husband, or annulment, or marriage, or when your child reaches the age of 21 or becomes married.

If in active service, and you are officially determined to be missing, missing in action, interned in a neutral country, captured by an enemy, beleaguered or besieged, your pay and allowance will be continued at the same rate. Naturally, entitlement to pay and allowances ends at your death.



- ***Dislocation Allowance***—In addition to the subsistence, clothing and quarters allowances described above, a "Dislocation Allowance" is payable to men with dependents upon a permanent change of station. This allowance, payable to men in pay grades E-4 (with more than four years' service) and above, under conditions described in Chapter IX, *Joint Travel Regulations,* is equal to one month's Basic Allowance for Quarters. For details, see BuPers Inst. 4651.1.

Table of Active Duty Service Pay and Allowances

RANK OR PAY GRADE	MONTHLY BASIC PAY (BASED ON CUMULATIVE YEARS OF SERVICE, ACTIVE AND INACTIVE)													
	Under 2 Yrs.	Over 2 Yrs.	Over 3 Yrs.	Over 4 Yrs.	Over 6 Yrs.	Over 8 Yrs.	Over 10 Yrs.	Over 12 Yrs.	Over 14 Yrs.	Over 16 Yrs.	Over 18 Yrs.	Over 22 Yrs.	Over 26 Yrs.	Over 30 Yrs.
O-8 Admiral	$1163.30	$1163.30	$1221.80	$1221.80	$1221.80	$1221.80	$1221.80	$1221.80	$1221.80	$1221.80	$1221.80	$1221.80	$1221.80	$1276.40
O-8 Vice Admiral	1063.30	1063.30	1121.80	1121.80	1121.80	1121.80	1121.80	1121.80	1121.80	1121.80	1121.80	1121.80	1121.80	1176.40
O-8 (Rear Adm. (Up. Hlf.))	963.30	963.30	1021.80	1021.80	1021.80	1021.80	1021.80	1021.80	1021.80	1021.80	1021.80	1021.80	1021.80	1076.40
O-7 Rear Adm. (Low. Hlf.)	800.28	800.28	850.20	850.20	850.20	850.20	850.20	850.20	850.20	850.20	850.20	850.20	904.80	967.20
O-6 Captain	592.80	592.80	631.80	631.80	631.80	631.80	631.80	631.80	631.80	655.20	717.60	748.80	780.00	811.20
O-5 Commander	474.24	474.24	507.00	507.00	507.00	507.00	507.00	530.40	561.60	577.20	608.40	639.60	670.80	670.80
O-4 Lieutenant Commander	400.14	400.14	429.00	429.00	429.00	452.40	483.60	499.20	514.80	530.40	561.60	577.20	592.80	592.80
O-3 Lieutenant	326.04	326.04	351.00	374.40	405.60	421.20	436.80	452.40	468.00	483.60	499.20	514.80	514.80	514.80
O-2 Lieut. (jr. gr.)	259.36	274.18	335.40	335.40	351.00	366.60	382.20	397.80	413.40	413.40	413.40	413.40	413.40	413.40
O-1 Ensign	222.30	237.12	296.40	296.40	312.00	327.60	343.20	358.80	374.40	374.40	374.40	374.40	374.40	374.40
W-4 (Chief W. Off.)	$332.90	$354.90	$354.90	$354.90	$370.50	$386.10	$401.70	$421.20	$452.40	$468.00	$483.60	$499.20	$514.80	$530.40
W-3 (Chief W. Off.)	302.64	323.70	323.70	323.70	331.50	339.30	347.10	358.80	374.40	382.20	405.60	428.00	443.60	459.20
W-2 (Chief W. Off.)	264.82	280.80	280.80	280.80	288.60	304.20	319.80	335.40	350.00	357.80	373.40	389.00	404.60	420.20
W-1 (Warrant Officer)	219.42	251.20	251.20	251.20	266.80	286.30	294.10	305.80	313.60	321.40	337.00	352.60	368.20	368.20
E-7 (Chief Petty Officer)	$206.39	$222.30	$222.30	$230.10	$237.90	$253.50	$261.30	$273.00	$280.80	$288.60	$304.20	$319.80	$335.40	$335.40
E-6 (Petty Off. 1st Cl.)	175.81	187.20	187.20	195.00	214.50	222.30	234.00	241.80	249.60	257.40	273.00	288.60	288.60	288.60
E-5 (Petty Off. 2nd Cl.)	145.24	163.80	163.80	183.30	191.10	202.80	210.60	218.40	226.20	234.00	241.80	257.50	257.50	257.50
E-4 (Petty Off. 3rd Cl.)	122.30	140.40	140.40	159.90	167.70	179.40	187.20	195.00	202.80	210.60	218.40	218.40	218.40	218.40
E-3 (SN, FN, AN, CN, TN, HN, DN)	99.37	117.00	117.00	132.60	140.40	148.20	156.00	159.90	163.80	163.80	163.80	163.80	163.80	163.80
E-2 (SA, FA, AA, CP, TA, HA, DA)	85.80	101.40	101.40	109.20	117.00	124.80	132.60	132.60	132.60	132.60	132.60	132.60	132.60	132.60
E-1 (Over 4 months) (SR) (Etc.)	83.20	98.80	98.80	106.60	106.60	106.60	106.60	106.60	106.60	106.60	106.60	106.60	106.60	106.60
E-1 (Under 4 months) (SR) (Etc.)	78.00													

RANK OR PAY GRADE	HAZARDOUS DUTY PAY (AVIATION PAY FOR CREW MEMBERS AND SUBMARINE DUTY PAY)													
	Under 2 Yrs.	Over 2 Yrs.	Over 3 Yrs.	Over 4 Yrs.	Over 6 Yrs.	Over 8 Yrs.	Over 10 Yrs.	Over 12 Yrs.	Over 14 Yrs.	Over 16 Yrs.	Over 18 Yrs.	Over 22 Yrs.	Over 26 Yrs.	Over 30 Yrs.
O-8 RADM (Upper Half) & above	$155.00	$155.00	$165.00	$165.00	$165.00	$165.00	$165.00	$165.00	$165.00	$165.00	$165.00	$165.00	$165.00	$165.00
O-7 Rear Adm. (Low. Hlf.)	150.00	150.00	160.00	160.00	160.00	160.00	160.00	160.00	160.00	160.00	160.00	160.00	160.00	160.00
O-6 Captain	200.00	200.00	215.00	215.00	215.00	215.00	215.00	215.00	215.00	220.00	245.00	245.00	245.00	245.00
O-5 Commander	190.00	190.00	205.00	205.00	205.00	205.00	205.00	210.00	225.00	230.00	245.00	245.00	245.00	245.00
O-4 (Lieut. Commander)	170.00	170.00	185.00	185.00	185.00	195.00	210.00	215.00	220.00	230.00	240.00	240.00	240.00	240.00
O-3 Lieutenant	145.00	145.00	155.00	165.00	180.00	185.00	190.00	200.00	205.00	205.00	205.00	205.00	205.00	205.00
O-2 Lieutenant (jr. gr.)	115.00	125.00	150.00	150.00	160.00	165.00	170.00	180.00	185.00	185.00	185.00	185.00	185.00	185.00
O-1 Ensign	100.00	105.00	135.00	135.00	140.00	145.00	155.00	160.00	170.00	170.00	170.00	170.00	170.00	170.00
W-4 (Chief W. Off.)	$115.00	$115.00	$115.00	$115.00	$120.00	$125.00	$135.00	$145.00	$155.00	$160.00	$165.00	$165.00	$165.00	$165.00
W-3 (Chief W. Off.)	110.00	115.00	115.00	115.00	120.00	120.00	125.00	135.00	140.00	140.00	140.00	140.00	140.00	140.00
W-2 (Chief W. Off.)	105.00	110.00	110.00	110.00	115.00	120.00	125.00	130.00	135.00	135.00	135.00	135.00	135.00	135.00
W-1 (Warrant Officer)	100.00	105.00	105.00	105.00	110.00	120.00	125.00	130.00	130.00	130.00	130.00	130.00	130.00	130.00
E-7 (Chief Petty Officer)	$80.00	$85.00	$85.00	$85.00	$90.00	$95.00	$100.00	$105.00	$105.00	$105.00	$105.00	$105.00	$105.00	$105.00
E-6 (Petty Off. 1st Cl.)	70.00	75.00	75.00	80.00	85.00	90.00	95.00	95.00	100.00	100.00	100.00	100.00	100.00	100.00
E-5 (Petty Off. 2nd Cl.)	60.00	70.00	70.00	80.00	80.00	85.00	90.00	95.00	95.00	95.00	95.00	95.00	95.00	95.00
E-4 (Petty Off. 3rd Cl.)	55.00	65.00	65.00	70.00	75.00	80.00	80.00	80.00	80.00	80.00	80.00	80.00	80.00	80.00
E-3 (SN, FN, AN, CN, TN, HN, DN)	55.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00
E-2 (SA, FA, AA, CP, TA, HA, DA)	50.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00
E-1 (Over 4 months) (SR) (Etc.)	50.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00
E-1 (Under 4 months) (SR) (Etc.)	50.00													
Aviation Cadets	50.00													

RANK OR PAY GRADE	OTHER SPECIAL AND HAZARDOUS DUTY PAY (Per month)*		SUBSISTENCE ALLOWANCE (with or without dependents)	QUARTERS ALLOWANCES (PER MONTH)	
	Sea and Foreign Duty Pay	Other Hazardous Duty Pay		No Dependents	With Dependents
O-8	Not eligible	$110.00	$47.88	$136.80	$171.00
O-7				136.80	171.00
O-6				119.70	136.80
O-5				102.60	136.80
O-4				94.20	119.70
O-3				85.50	102.60
O-2				77.10	94.20
O-1				68.40	85.50
W-4	Not eligible	$110.00	$47.88	94.20	119.70
W-3				85.50	102.60
W-2				77.10	94.20
W-1				68.40	85.50
E-7	$22.50	$55.00	A daily rate of $2.67 when rations in kind are not available. When permission is granted to mess off, the base you are paid commuted rations at the rate of $1.00 per day. Leave rations are $1.00 per day and are paid for each day you are on authorized leave.	$51.30 (authorized only when govt. quarters are not available)	See Explanation in columns at right
E-6	20.00				
E-5	16.00				
E-4	13.00				
E-3	9.00				
E-2	8.00				
E-1	8.00				
E-1	8.00				

QUARTERS ALLOWANCES AND MONTHLY ALLOTMENTS FOR ENLISTED PERSONNEL WITH DEPENDENTS

The columns listed below apply only to enlisted personnel with dependents. The enlisted person's quarters allowance is determined by his pay grade and by the number of persons who are legally dependent upon him, up to a maximum of three dependents. A sum equal to this quarter's allowance (column A), as authorized by the Dependents Assistance Act of 1950, is combined with a certain minimum portion of the enlisted man's basic pay (column B), and together with A, plus B, are equivalent to the minimum amount of the allotment check which the Government sends to the enlisted man's dependent.

REMEMBER, in figuring out the actual amount of your service pay and allowances which you will receive in your personal check (or in cash), SUBTRACT the amount in column B (plus any additional contribution by allotment to your dependents) from the amount listed in your pay grade under "Monthly Basic Pay." The sum in column B represents the required minimum amount from your basic pay which you must contribute to your dependent's allotment. This sum in column B is included with the Government's contribution in column A to equal the amount mailed by the U. S. Navy Finance Center, Cleveland 14, Ohio, direct to your dependent. Payments of your pay will continue in even dollars. Balances of cents, as before, will be carried over and credited to your pay record.

YOUR EXACT PAY can be figured if you ADD your clothing allowance, any special or hazardous duty pay (sea pay, flight pay, etc.) or commuted rations. Then SUBTRACT any allotments such as your own contribution to BAQ, withholding tax, Defense Bonds, insurance, savings bank accounts, excess leave checkage, etc.

PAY GRADE	A			B	A+B-▼		
	BASIC QUARTERS ALLOWANCE FOR DEPENDENT(S)			ENLISTED MEMBER'S CONTRIBUTION FROM BASIC PAY	MINIMUM AMOUNT OF MONTHLY ALLOTMENT TO DEPENDENT(S)		
	1 depend.	2 depend.	over 2 dep.		1 depend.	2 depend.	over 2 dep.
E-7(CPO)	$77.10	$77.10	$96.90	$80.00	$157.10	$157.10	$176.90
E-6(PO1)	77.10	77.10	96.90	80.00	157.10	157.10	176.90
E-5(PO2)	77.10	77.10	96.90	60.00	137.10	137.10	156.90
E-4(PO3)	77.10	77.10	96.90	60.00	137.10	137.10	156.90
E-3(SN)	51.30	77.10	96.90	40.00	91.30	117.10	136.90
E-2(SA)	51.30	77.10	96.90	40.00	91.30	117.10	136.90
E-1(SR)	51.30	77.10	96.90	40.00	91.30	117.10	136.90

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*See accompanying article for details and rates of special pay for doctors and dentists, diving duty, and combat pay (considered as hazardous duty pay).

commissary and exchange privileges

Many phases of Navy life have been introduced with the purpose of making life easier and more pleasant for you. One feature which your wife will especially appreciate is the privilege of purchasing food, household and personal items at a reasonable cost through commissaries, Navy Exchanges and ships stores ashore.

These government facilities mean that you and your dependents, whether you are stationed overseas, ashore or shipboard, are able to purchase basic commodities at fair prices. Shoreside Exchanges and commissaries are conveniently located in naval activities.

In overseas branches of these activities you may buy foodstuffs and Navy Exchange items that would otherwise not be available. In addition, many of these items ordinarily obtainable overseas by other means carry a much higher price tag. Exchange and commissary prices are based on the same price scale as their Stateside counterparts.

The extent and type of items carried and commissaries and Exchanges in overseas facilities are usually described in considerable detail in the *Information on Living Conditions* pamphlets (see page 13) issued by the Personal Service Branch (Pers G221) of the Bureau of Naval Personnel.

- ***Commissaries*** sell food and other commodities at the lowest prices possible for the benefit of naval personnel and their dependents, and are usually operated at the larger naval installations. In this instance, the same definition for "dependents" applies as that for entitlement to BAQ (see page 6).

- ***Exchanges*** and ship's stores ashore and afloat sell at reasonable prices articles of necessity and convenience not supplied by the Navy. They are maintained at the majority of stations ashore and in ships for the benefit of you and your dependents.

The other armed forces, particularly where no Navy exchange is available, extend to naval personnel and their dependents the privilege of making purchases at their commissaries and Exchanges. A permit is usually required, which may be obtained from the officer in charge.

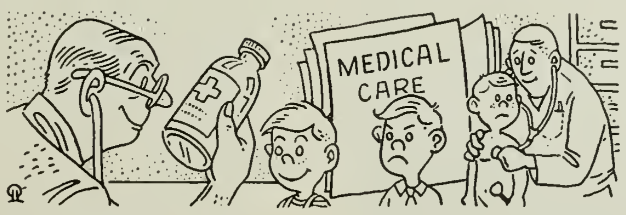
When buying at Navy Exchanges and commissaries, it is required that you do not resell the items, either at a profit or loss, to unauthorized persons. Whatever you buy must be for personal use by you or your dependents or for use as a bona fide gift.

This means that you can't keep your neighborhood supplied with groceries either free or on a reimbursable basis. Violation of this requirement can mean the loss of your privileges.

medicare-for family and you

MEDICAL CARE FOR DEPENDENTS—once a big problem in the "brownbagger's Navy"—ceased to be a cause of worry when the 84th Congress passed Public Law 569 (Dependents Medical Care Act). That law was designed to improve morale by providing better care for dependents, and this was accomplished by:

- Officially recognizing this traditional benefit while establishing a uniform level of medical care for all military services.
- Providing medical care through civilian medical facilities for spouses and children of active duty personnel who do not have access to service medical facilities.
- Continuing the practice of offering medical care to dependents and retired personnel at service medical facilities; in addition the new law permits dependents and retired personnel of all the uniformed services to obtain available medical care at any medical facility of the Army, Navy, Air Force or Public Health Service.



- Permitting retired personnel to obtain dental care at facilities of the uniformed services.
- Providing such additional benefits as hospitalization of Army and Air Force retired enlisted members without charge for subsistence (a benefit already available to retired enlisted Navymen), and hospitalization of dependents in excess of one year in unusual cases.

SecNav Inst. 6320.8, a directive issued jointly by the Air Force, Army, Navy and Public Health Service, gives a complete rundown on the care available to dependents, the cost and the sources from which care may be obtained. Below you will find most of the information you (and your dependents) should know in case medical aid is required.

Dependents Eligible

Dependents eligible for service under the medical care act are defined as persons who bear one of the following relationships to any member or retired member of a uniformed service, or to a person who died while a member or retired member of a uniformed service:

- Lawful wife.
- Unremarried widow.
- Lawful husband, if in fact dependent for over one-half of his support.
- Unremarried widower, if in fact dependent for over one-half of his support because of mental or physical incapacity at time of member's or retired member's death.
- Unmarried legitimate children (including adopted or stepchildren) if under 21.
- A parent or parent-in-law who is (or was at time of member's or retired member's death) in fact dependent upon the member or retired member for over one-half of his support and who is (or was at time of the person's death) residing in the member's household.
- An unmarried legitimate child (including adopted or stepchild) who

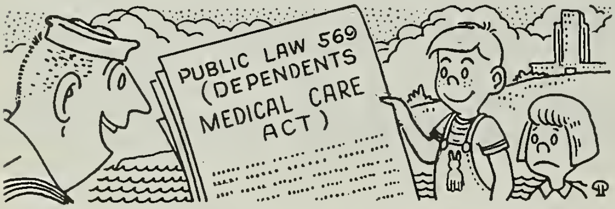
  1. Has passed 21st birthday, but is incapable of self-support because of mental or physical incapacity,

provided incapacity existed before child was 21 and child is (or was at the time of the member's or retired member's death) dependent upon member for over one-half of his support.

2. Has not passed 23rd birthday and is enrolled in a full-time course of study in an educational institution approved by the Secretary of Health, Education and Welfare, and is (or was at the time of the member's or retired member's death) dependent for over one-half of his support.

Any person who meets the above requirements and has proper identification (See page 21) is entitled to medical care in facilities of the uniformed services; *eligibility for* CIVILIAN *medical care, however, is limited to the lawful wife or dependent lawful husband and children who are dependents of active duty members of the uniformed services.*

Normally, dependents requesting care at a military medical facility will be expected to use the facilities servicing the area in which the dependent resides. Local exceptions to this policy may be authorized, however, to permit a dependent to use the facilities of the sponsor's own service. In any case, local military commanders will decide the areas to be serviced by each military medical facility, including zones in which dependents may have a choice of facilities.



Medical care from civilian sources, aside from being limited to the dependents specifically noted above, has other limitations. For instance, in overseas areas other than Alaska, Hawaii and Puerto Rico, the following policy is effective: Where military medical facilities are available and are capable of providing the required care, spouses and children must use these facilities. Where service facilities are either nonexistent or incapable of providing adequate care, spouses and children who are residing with their sponsor may use appropriate civilian facilities. Dependents in the latter areas who are not residing with their sponsor may apply to the appropriate overseas commander for accepted civilian medical care. Major overseas commanders or commanders having comparable responsibility conduct the medical and dental programs for dependents in overseas areas (outside Alaska, Hawaii and Puerto Rico) and provide payment for authorized medical care which dependents receive from civilian sources. Overseas commanders will provide information regarding the civilian medical care program.

Within the U. S., Alaska, Hawaii and Puerto Rico:

- Spouses and children not residing with their sponsor will have free choice between service and civilian facilities.
- Spouses and children residing with their sponsor shall have free choice of facilities *except* that some areas may be for service medical facilities only.

You should also know that spouses and children are considered to be residing with their sponsor if they reside in the sponsor's household in the area of his permanent duty station (including home port or home yard of a ship) even though the sponsor may be absent on duty with his unit or ship, or on TAD orders. If the dependent is temporarily absent from the area of the sponsor's household, then he shall have free choice between civilian and military facilities during the period of such absence.

Medical Care Authorized

- ***From Facilities of the Uniformed Services.*** Here are the medical services which your dependents may receive from facilities of the uniformed services:
- Diagnosis.
- Treatment of acute medical conditions, including acute flare ups or acute complications of chronic diseases.
- Treatment of surgical conditions and contagious diseases.
- Immunization.
- Maternity and infant care.
- In addition, treatment may be provided for acute emergencies of any nature (including mental disorders) which are a threat to the life, health and well-being of the patient. Such hospitalization at government expense is authorized only pending completion of arrangements for care elsewhere unless the emergency also falls into one of the above categories. And if a hospitalized dependent requires care beyond the capabilities of the medical facility, the service medical facility may procure appropriate care from civilian sources, or the patient may be transferred to a service medical facility where the required treatment is available.

Under ordinary circumstances home calls and ambulance service are not authorized, nor is domiciliary care and hospitalization for chronic diseases, nervous and mental disorders (except for diagnostic purposes) and elective medical and surgical treatments. Ordinarily the following devices are not available from government sources either: artificial limbs, artificial eyes, hearing aids, orthopedic footwear and spectacles.

- ***From Civilian Sources.*** Only wives, dependent husbands, and children of *service members serving on full time active duty* are eligible to receive medical and hospital services from civilian sources, as follows:
- Treatment of acute medical conditions, including acute flare up or acute complications of chronic diseases, if you are already hospitalized.
- Treatment of surgical conditions, only during the period of hospitalization.
- Treatment of contagious diseases during the period of hospitalization.
- Complete obstetrical and maternity care, including prenatal care, delivery and postnatal care.
- A maximum 365 days' hospitalization in semiprivate accommodations for each admission, including necessary services and supplies furnished by the hospital during the period.
- Treatment of injuries when hospitalization is not required, if the cost of such treatment exceeds $15.
- Services required of a physician or surgeon before and after hospitalization for the same bodily injury or surgical operation for which the dependent is hospitalized.
- Treatment in a hospital of any acute emergencies

of any nature which are a threat to the life, health or well-being of the patient (including acute emotional disorders). Care of such emergencies in civilian hospitals is authorized at government expense only until the sponsor, or other responsible person, can arrange for appropriate care of the dependent at the personal expense of the sponsor unless it is an illness or condition for which hospitalization is authorized under the first four conditions listed above.

- Diagnostic tests and procedures including laboratory tests and pathological and radiological examinations when ordered by the attending physician during a period of hospitalization.
- Dental care (excluding removable or fixed prosthodontic restorations) which constitutes a necessary part of the medical or surgical treatment of a dependent during a period of hospitalization for which the dependent is receiving authorized care.
- Private duty nursing care. If the attending physician certifies that private duty nursing care is required, the government will also bear a portion of the cost of such service.
- ***Care Not Authorized.*** Spouses and children are not authorized to receive medical service from civilian sources for the following:
- Chronic diseases (except acute exacerbations or complications of such diseases as specified above).
- Nervous and mental disorders (except in certain emergencies).
- Elective medical and surgical treatment.
- Domiciliary care.
- Treatments and procedures normally considered outpatient care.
- Ambulance service, except as noted above.
- Artificial limbs, artificial eyes, hearing aids, orthopedic footwear and spectacles.

Dental Care

While dependents are not authorized dental care at civilian facilities (except as a necessary adjunct to medical or surgical treatment), certain services are authorized to be performed by dental facilities of the uniformed services. For instance:

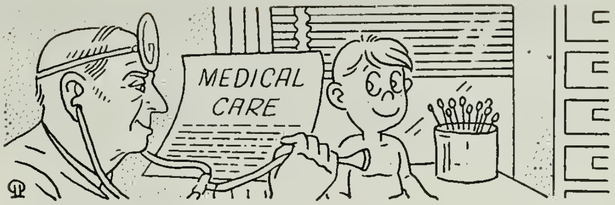
- Within most areas of the U. S., you may request emergency care to relieve pain or suffering. But this does not include orthodontic or prosthodontic work, nor does it include permanent restorative work.
- In designated "remote areas" of the U. S., and outside the continental limits wherever civilian medical facilities are not available, you may request routine dental care. This includes the general operative, surgical and prosthodontic treatment provided for members of the armed forces. Such care will be made available without charge provided adequate staff and facilities are available.

Charges for Inpatient Care

Medical facilities of the uniformed services will continue to charge $1.75 per day for inpatient medical care. No charge is made for outpatient medical care under ordinary circumstances; however, abuse of outpatient care privileges may lead to the setting of minimal charges at particular facilities.

Charges at Civilian Medical Facilities

Charges for services performed by civilian medical facilities are more complicated. The basic charge for each admission to a civilian medical facility will be the larger of the following sums: $25, or a sum equal to $1.75 per diem multiplied by the number of days hospitalized.



If the charge for hospitalization is $25 or less, the patient shall pay the charge as a direct transaction not involving the government. The same procedure will be followed for authorized care of an injury not involving hospitalization if the physician's charge is $15 or less.

Note, however, that charges are on a somewhat different basis for the following:

- When a private room is declared necessary, the patient must pay the larger of the basic charges plus 25 per cent of the difference between the cost of a private room and the average cost of semi-private accommodations. If a private room is not required, but you desire such accommodations, then you must pay the entire difference yourself.
- Private-duty nursing care when declared necessary by the attending physician—the patient must pay $100 plus 25 per cent of any additional charge.
- When a spouse or child is treated for a bodily injury and hospitalization is not required for treatment of such injury, the dependent will pay the first $15.00 of the physician's charge for each different accident for which treatment and services are rendered. If the treatment of the injury is given in outpatient department or emergency facilities of a hospital, the charges for use of the hospital facilities will be paid by the government. If laboratory tests or x-ray examinations are ordered by the physician in connection with treating the bodily injury, cost of such tests or examination to the government is limited to $75.00 partially paid for by the government. In either case you must pay a basic charge of $15, and cost to the government in most cases is limited to $75.
- Obstetrical patients. Patients who are delivered in a home or office shall pay the physician the first $15 in connection with the delivery if not subsequently hospitalized; if hospitalized, the basic $25 or $1.75 per diem charge must be paid.

housing - at home and abroad

THROUGH THE FAMILY HOUSING Program, the Navy offers its married men and their families added security. Although adequate quarters are not always available for every married Navyman and his family, the Navy is continually attempting to better the over-all housing situation.

Today, the Navy has more than 80,000 family housing units and more are becoming available almost daily. Approximately 35,000 additional units are now in the planning or construction stages, the first of which are scheduled for occupancy by mid-July 1957.

The family units included in the Navy's Family Housing Program consist of public quarters, government rental units and government-insured privately financed projects.

Here's a rundown of the three broad categories of housing available and some information concerning regulations governing your assignment to them.

- ***Public Quarters***—This is government-owned or government-controlled housing administered by the Navy and occupied without payment of cash rent. If you occupy this type of housing, you surrender in full your BAQ, but on the other hand, you have no further expenses to pay for your housing. It is available to both officers and enlisted personnel.

If you are an officer and report for duty at a permanent activity where public quarters are available, you will be assigned quarters by the CO of your new activity. Quarters may include utilities and furniture. As a rule, due consideration is given to the suitability of the quarters for the officer concerned, his position in the organization and his grade as well as the size of his family.

If an officer is not accompanied by his family when he reports to a new station, his CO will assign him to a room in the Bachelor Officers Quarters, if available. In this connection, considerable attention is being given to increased livability of BOQs in the way of furnishings and facilities.

When public quarters for married enlisted men are available, assignment is made by the commanding officer, who bases his decision upon the number of dependents, and other considerations.

If you are a married enlisted man and are not furnished family public quarters (if you are entitled to such quarters) you will be provided with accommodations for yourself aboard your ship or station and will be paid your BAQ in lieu of such family quarters.

When government quarters are first assigned, the housing officer of the command having cognizance over the quarters originates your agreement to surrender your BAQ by forwarding a DD Form 114 in triplicate to your commanding officer. The CO then forwards the original and duplicate of this form to the disbursing officer having custody of your pay record and the necessary pay record adjustments are made.

- ***Rental Housing***—This is Navy-owned and-operated housing for which the Navyman pays a stipulated amount as rent without forfeiture of his quarters allowance. The primary distinction between rental housing and public quarters is the basis upon which the occupancy of government space is held. In the case of rental housing, occupancy is established on the basis of the landlord-tenant relationship involving payment of specified amount and a contractual agreement between the government and the Navyman, which gives the Navyman the same rights in the property rented that he would have if he were renting from a private owner. (In the case of public quarters, discussed above, the occupant has possession on a strictly "permissive basis"; he has no contract and his housing is at the sole option of the government.)

The Navy manages government rental housing for Navy personnel. The commanding officer sets up a local housing organization, the size of which depends on the number of rental housing units, the locations and concentrations of housing at his activity, and the availability of personnel and funds. Each prospective tenant for rental housing must file a Navy Rental Housing Projects Application (NavDocks Form 430 or other prescribed form) through his unit commander or directly to the housing management as specified by the CO of the activity.

There are usually waiting lists for each type and size of unit, established and maintained by the project housing office. Your position on a waiting list is usually determined by the *date of your application* or the *date you report for duty.*

- ***Title VIII Housing***—Available to you and your family under Title VIII of the National Housing Act are two types of quarters—Wherry and Capehart Housing.

Wherry Housing consists of privately financed and privately operated rentals which are made available to you on a voluntary basis. At present, there are about 24,000 Wherry units throughout the U.S. and Hawaii for Navy and Marine Corps personnel. Rental rates have been established in accordance with officer and enlisted BAQ in order to keep the rent within your means. All Wherry Housing is unfurnished, except for refrigerator and stove. In some cases, the flat rental rate includes the cost of all utilities (heat, gas and electricity), while in others, you are charged for them in addition to your rent.

First preference for occupancy of Wherry Housing is given to officers and enlisted personnel based ashore in the area where the housing is located. If conditions permit, personnel assigned to Fleet units homeported in the area are also given priority in being assigned.

Capehart Housing—The National Housing Act as amended by Public Law 345 opens the way for construction of approximately 35,000 new public quarters (as defined above) for officers and senior enlisted men of the Navy and Marine Corps. This new-type housing, commonly called Capehart Housing, will be furnished, and if you occupy it you'll give up your BAQ.

Recent legislation (the Housing Act of 1956) permits the Navy to take over Wherry Housing projects and convert them to public quarters or rental housing. This law in effect will remove private control over present Title VIII housing and put all of it under Navy control. When this is done, those units that can readily be remodeled to meet the standards of public quarters will be renovated, furnished and redesignated. Personnel occupying these quarters will be required to relinquish their BAQ each month.

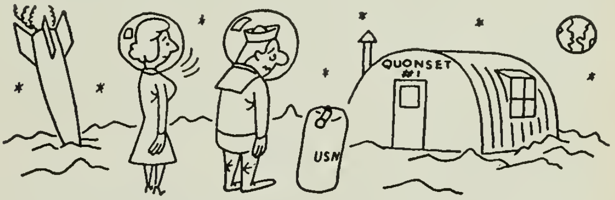
If present Wherry units cannot economically be converted to meet the standards prescribed for public quarters, they will then be used as rental housing and will be operated accordingly. Since the Capehart program is still under development and appropriations for the Navy to purchase the Wherry units have not been approved, there is no indication at present as to what portion of the Wherry units the Navy will take over.

In areas where Navy housing shortages exist and you find it necessary to look for civilian housing on your own, it is advisable to consult your Legal Assistance Officer before signing a lease or contract.

Navy Community Life

Wherever you live you'll find that Navy life is a "community affair" and you are an important part of it. There are recreation, social and cultural activities sponsored by the Navy to bring Navy families together. Picnics, street-dances, card parties, athletic events, garden club contests, scouting competitions and hikes, concerts, movies, lectures and other kinds of events are often arranged making for the enrichment of Navy life.

You will find that everyone in the "community" is anxious to be your friend and be a part of the big Navy family. In civilian housing projects where Navy families live, Navymen are conscious of this and know that if they "fall down" it reflects on the whole community. Keeping your quarters in shipshape condition is one of the best contributions to community life that you can give. Every Navy community has a place where you can obtain lawn mowers, garden equipment, rakes, etc. There is regular garbage and trash pickup, too.



★ ★ ★ Info on Overseas Living Conditions ★ ★ ★

If you plan to take your family with you when going to an overseas station, you should investigate the living conditions in that area before leaving the United States. Pamphlets which give a general idea about the living conditions (shelter, schools, transportation, stores, required clothing, food, etc.) for various foreign locations may be obtained from the Bureau of Naval Personnel.

Here is a complete list of pamphlets available on living conditions at overseas stations, large and small. Personnel can get the latest information, on living conditions and various other compiled data, by addressing a request to the Chief of Naval Personnel (Attn: Pers G221), Navy Department, Washington 25, D. C.

In addition to the pamphlets that are available from the Bureau on the following overseas locations there is a report on living conditions in Washington, D. C.

Alaska:
  - **Adak**
  - **Kodiak**

Antigua, BWI
Azores
Bahrein Island (Persian Gulf)
Belgium
Bermuda
Brazil
Chichi Jima
Cuba (Guantanamo Bay)
Denmark (Copenhagen)
Eleuthera Island
England (London)
Eritrea (Asmara)
France (Paris)
French Morocco (Port Lyautey)
Germany (general):
  - **Bonn**

Greece
Hawaii
Iceland
Ireland (Londonderry)
Italy:
  - **Naples**
  - **Leghorn**
  - **Rome**

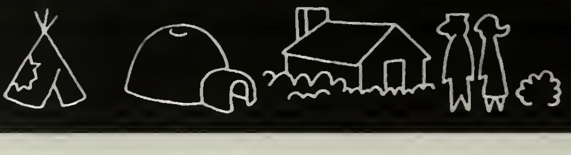
Japan:
  - **Yokosuka**
  - **Sasebo**
  - **Tokyo**
  - **Iwakuni**

Kwajalein
Malta
Marianas:
  - **Guam**
  - **Saipan**

Midway
Newfoundland (Argentia)
Norway (Oslo)
Nova Scotia (Shelburne)
Okinawa
Pakistan (Karachi)
Panama Canal Zone
Philippine Islands
Portugal (Lisbon)
Puerto Rico
Spain: Madrid
  - **Barcelona**
  - **Rota**

Taiwan (Formosa)
Thailand (Bangkok)
Trinidad, BWI
Turkey
Vietnam (Saigon)
Mediterranean Area (Sixth Fleet)

buying a home



NEXT TO MARRIAGE AND YOUR CHOICE of a career, buying a home is one of the big decisions of your life—and it should be, since it will probably represent your biggest single purchase.

When this time rolls around, you'll be happy to know that available to you as a Navyman are two methods of financing a home. The first is the popular "in-service home loan insurance program" — better known as FHA-Military financing, while the other method, providing you are a qualified veteran of World War II or the Korean conflict, is under the G.I. Bills.

The in-service home loan insurance program enables you, while on active duty, to buy a home on reasonable terms and with a much lower down payment than would ordinarily be required. Under Section 222 of the National Housing Act, the Federal Housing Administration (FHA) is authorized to insure loans made by private lending institutions to you for the purpose of building or buying a home.

In order to qualify for this FHA insurance, you must:

- Have two or more years' active duty.
- Establish a need for a house and obtain from the Navy a certificate of eligibility for a loan.
- Meet FHA standards of an approved borrower on the basis of your credit, income and financial responsibility.

In addition, the FHA must approve the house you plan to build or buy.

Your mortgage must cover a one-family dwelling, and you or your family must live in it or certify that your failure to do so is the result of military orders.

The amount of your FHA-insured mortgage may be as much as 95 per cent of the FHA-appraised value of the property up to a maximum of $18,000. This permits a maximum $17,100 mortgage amount and a minimum down payment of five per cent.

Although the top mortgage allowance is $17,100, no limit is placed upon the value of the home you may purchase. If you want a home that costs more than $18,000 then you must make a down payment large enough to bring the unpaid balance down to the $17,100 mortgage limit.

If you buy a home under Section 222 of the National Housing Act you'll enjoy two specific advantages over borrowers under other FHA insured programs. The first is the low down payment, and the second a lower interest rate.

Let's take a look at these advantages. If you were buying a $15,000 FHA-valued home, your down payment would be only five per cent of that amount or $750, while other buyers under regular FHA programs would have to pay at least $2400 down. When it comes to interest, you need only pay a maximum five per cent interest rate; others are required to pay a minimum of five and one-half per cent. This is because the Navy pays the additional one-half of one per cent of your mortgage insurance premium annually.

In this respect, your monthly payments for the unpaid balance of your $15,000 home would be approximately $75 per month for a 25-year period; anyone else with the same balance ($14,250) would be required to pay approximately $90 per month. So you see, it's to your advantage to buy a home under Section 222 of the National Housing Act, while you are on active duty.

Although this bill authorizes the FHA to insure loans up to $17,100, it does not mean that just because you are on active duty, you will be allowed to get a mortgage for the maximum amount. You must have a certain annual income, and must meet credit requirements. The FHA has established criteria by which they determine your eligibility for a loan. They figure the amount of your income in relationship with the maximum monthly payments they feel you will be able to make each month. Your maximum monthly payments, including taxes, interest, principal and the cost of utilities, usually are figured to equal no more than one fourth of your pay.

You should understand that the FHA does not lend money, build houses, or furnish house plans. Private capital is made available for home loans through the various types of lending institutions cooperating in the FHA program.

If your income is sufficient, your credit good, and you are unable to obtain a loan for a home from private lending institutions, you should apply for Voluntary Home Mortgage Credit Program (VHMCP) assistance. This program, sponsored by private enterprise, will attempt to find a lender who will make the loan. Information and the necessary forms for application under this program are available at any local FHA, VA, or VHMCP office, or from the Voluntary Home Mortgage Credit Program, National Committee, Washington 25, D. C.

"IN SERVICE" FHA INSURED LO
G.I. BILL

The first step in applying for the "in-service" FHA Home Loan Insurance is to obtain from your CO a "Request for and Certificate of Eligibility" (Department of Defense Form 802). Part I of this Form requires the following statements:

- That you are currently serving on active duty,
- That you have served on active duty in any of the armed forces for more than two years (does not have to be continuous),
- That you require housing.

Part II of the form is the Certificate of Eligibility and is completed by one of the following persons: 1) Secretary of the Navy; 2) Chief of Naval Personnel; 3) your commanding officer or officer in charge of the activity having responsibility for the custody and maintenance of personnel records.

When this is completed, you present the original and three copies of the approved certificate to the FHA-approved lender or his agent at the time you make application for an FHA mortgage loan.

After applying for your loan, and before signing your contract you should be sure that any promises or agreements between you and the seller are put in writing and signed, subject to the approval of your attorney. You'll find that the money paid to a competent lawyer for advising you on every step in the process of buying a home will assure you of getting a fair deal.

The contract you and the seller sign commits you to buy and the seller to sell you the property at an agreed price and on a specific date, which is usually the day final settlement is made.

Before you sign the contract, you should be sure that it includes a clause that does not make the contract binding in the event the FHA-appraisal is below the agreed selling price.

If you are buying your home through a real estate agent, he may provide you with a lender who will handle your mortgage. If not, you then find one on your own. The lender will make a thorough check into your financial status and make a detailed examination of your credit rating, as well as determine if you have the necessary down payment and closing out charges *(settlement costs). The closing out costs include insurance and legal fees in connection with the transfer of the property. They usually cost anywhere between $300 and $600.*

The lender forwards your DD 802 to the FHA who process your application and determine your eligibility by inspecting and appraising the property and determining if your income is adequate to purchase the house.

Buying A Home Under the G. I. Bill

The second method of financing a home is under the G.I. Bill (which is also discussed on page 58). If you served on active duty for 90 days or more during World War II you still have until 25 Jul 1958 to take advantage of the World War II G.I. loan privilege.

You have until 31 Jan 1965 to use your loan entitlement under the G.I. Bill for service during the Korean conflict. You are eligible for this if you were on active duty for 90 days some part of which was between 27 Jun 1950 and 1 Feb 1955.

In order to get a G.I. loan you must obtain a Certificate of Eligibility. You can receive this from your nearest VA Regional Office by submitting a copy of your *discharge or separation papers* along with a Request for Determination of Eligibility and Available Entitlement (VA Form 4-1880).

You don't have to be out of the service to take advantage of the G.I. home loan benefit, but you must have been discharged or separated at some time after having served during World War II or the Korean conflict, depending upon which bill you intend to use. Your discharge or separation need be no longer than a day—so long as you have a discharge or notice of separation, you are eligible for a G.I. loan. You must submit the original copy of your discharge certificate, notice of separation or DD Form 214 to the VA when requesting a certificate of eligibility for a G.I. loan.

Once you receive your Certificate of Eligibility the remaining steps are about the same as for the in-service FHA-insured loan. The VA puts out a pamphlet (VA 410) providing info about obtaining a G.I. Loan.

The basic difference between the G.I. and in-service loans is that the VA does not require a specific down payment while the in-service loan requires a five per cent down payment.

Another difference in the two loans is the interest rate. Under the G.I. Bill the interest rate is only four and one-half per cent. The in-service FHA insured loan will cost you five per cent, and the Navy pays the one-half of one per cent mortgage insurance premium. If you die, get out of the Navy or sell your FHA-military home, the Navy stops paying its share of the Mortgage Insurance Premium and then you, your survivors or new owner will have to pay the full five and one-half per cent interest rate. The G.I. loan rate, however, stays at the four and one-half per cent rate regardless of the circumstances. Therefore, before you decide to buy, better investigate both methods.

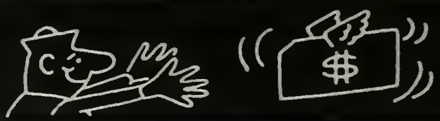
No matter whether you use the in-service FHA-insured mortgage, the G.I. Bill or some other method of financing your new home, you should stay within your budget. Here are some figures that may give you an idea of just how much it will cost you.

Table of House Payments

The following table shows what the monthly payments (interest and principal) will be each month *on each $1000* borrowed at the various interest rates and for various time periods.

INTEREST (per cent)	10 YEARS	15 YEARS	20 YEARS	25 YEARS
4	$10.13	$7.40	$6.06	$5.28
4½	10.37	7.65	6.33	5.56
5	10.61	7.97	6.60	5.85
5½	10.86	8.18	6.88	6.15

reenlistment bonus



MONEY MAY NOT GROW on trees, but the day you reenlist you'll probably feel as if you've at least discovered a money bush.

For example, take the hypothetical case of the three Doakes brothers from Kansas, who are all stationed at Norfolk, Va., and planning to reenlist on 15 Jun 1957:

Joe, an unmarried ET2, joined the Navy on 15 Jun 1953 for a four-year hitch. This will be his first reenlistment, and he's signing up for six years.

Bill, a married EM1, joined up for six years on 15 Jun 1945 and reenlisted for six more on 15 Jun 1951. On this, his second reenlistment, he'll be signing up for another six-year hitch.

Sam, a married BMC, originally enlisted for four years on 15 Nov 1941, and has since reenlisted three times for four-year hitches. But (for bonus purposes) this will be his third reenlistment. He's going to sign up for four years again.

Here's what each will collect:

	Joe	Bill	Sam
Reenlistment Bonus	$ 982.80	$ 936.00	$ 374.40
*Mustering-out pay	300.00	....	....
Unused leave (for 60 days including BAQ of $1.25 a day for married men and 70¢ a day subsistence for all three)	369.60	585.00	678.60
Travel pay for 1500 miles at six cents a mile	90.00	90.00	90.00
SUB-TOTALS	$1742.40	$1611.00	$1143.00
Income tax (18 per cent is withheld from bonus and basic pay for unused leave)	—235.87	—252.72	—168.48
TOTALS	$1506.53	$1358.28	$ 974.52

*Joe would collect mustering out pay because he enlisted before 1 Feb 1955. Bill and Sam would not because they have collected it on previous reenlistments.

As you can see, reenlistment really pays off—especially those made under Section 208 of the Career Compensation Act of 1949 as amended. Here we'll try to explain the bonus provisions in that law and also give you some information on the older bonus provided by Section 207 of the same act. But before we do, here are some definitions you must understand:

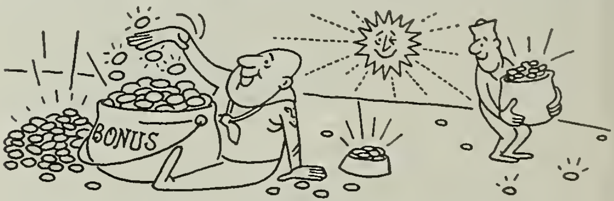
- ***Reenlistment***—For determining your right to a bonus under Section 208, reenlistment means:

An *enlistment* in the Regular Navy after compulsory or voluntary active duty in either a Regular or Reserve component of the Navy or:

A voluntary *extension*, in the Regular Navy, of an enlistment for two or more years.

When counting the number of reenlistments for which the bonus is payable, under Section 208, only a reenlistment entered into AFTER 1 Oct 1949 for which reenlistment bonus or reenlistment allowance was payable should be counted.

- ***Active Federal Service***—"Active Federal Service" is defined as *active service* excluding time lost and leave without pay in the Army, Navy, Air Force, Marine Corps, Coast Guard, or any of their components. (Only such time *actually* served during a minority enlistment or an enlistment which is terminated before its normal expiration date may be counted as active service.) *Inactive* service in a military Reserve component is NOT "Active Federal Service" for purposes of reenlistment.



- ***Basic Pay*** is considered to be the pay (for your grade and length of service) which you were actually drawing at the time of discharge for reenlistment purposes. Thus, Joe Doakes' bonus would be figured according to the basic pay for an E-5 with more than two, but less than four years' cumulative service, since he won't be entitled to the pay of an E-5 with *over* four years' service until after he reenlists. Similarly, Bill would compute his bonus as an E-6 with more than 10, but less than 12 years' service, and Sam would figure his as an E-7 with more than 14 years' service.

Eligibility for Reenlistment Bonus

In general, the bonus under Section 208 applies to the following:

- Any enlisted person who reenlists in the Regular Navy (on or after 16 Jul 1954), if such reenlistment occurs within 90 days after his date of last discharge or release from active duty in the same service.
- Any ex-officer or ex-warrant officer who reenlists in the Regular Navy (on or after 16 Jul 1954) within 90 days after date of release from active duty as an officer or warrant officer, if he served in a Navy enlisted status immediately before serving as an officer or warrant officer.

However, those who reenlist after completing a total

Reenlistment Bonus

Pay Grade	First Reenlistment	Second Reenlistment	Third Reenlistment	Fourth & Other Reenlistments
E-7	Equals one month's basic pay for each year of reenlistment	Equals 20 days' basic pay for each year of reenlistment	Equals 10 days' basic pay for each year of reenlistment	Equals 5 days' basic pay for each year of reenlistment
E-6	Same as above	Same as above	Same as above	Same as above
E-5	Same as above	Same as above	Same as above	Same as above
E-4	Same as above	Same as above	Same as above	Same as above
E-3	Same as above	Same as above	None	None
E-2	Same as above	None	None	None
E-1	Equals 20 days' basic pay for each year of reenlistment	None	None	None

of 20 years of active federal service are NOT entitled to a reenlistment bonus, under Section 208.

Some Navymen Have Choice of Bonus

If your first enlistment occurred after 16 Jul 1954, you are eligible for reenlistment bonus only under Section 208. But if you originally enlisted before that date and haven't reenlisted since, you must decide whether you want payment under Section 208 or under Section 207. (Section 207 provides for set sums from a minimum of $40 for a two-year reenlistment to a maximum of $360 for a six-year reenlistment.)

However, once you elect to receive a reenlistment bonus under Section 208, you'll have to stick with it. In other words, once you've been paid a bonus under Section 208 you'd no longer be eligible for a "Section 207" bonus under a later reenlistment.

How to Compute Your Bonus

Since the great majority of Navymen choose the "Section 208" bonus here are its main points:

- For your first reenlistment, the bonus is computed by multiplying the number of years for which you reenlist by an amount equal to your monthly basic pay at the time you were last discharged or released from active duty.
- For the second reenlistment your bonus would be computed by multiplying the number of years for which you reenlist by two-thirds of your monthly basic pay at the time you were last discharged or released from active duty. For the third reenlistment it would be one-third of your monthly basic pay, times the number of years for which you reenlist, and for the fourth and subsequent reenlistments, it would be one-sixth of your monthly basic pay, times the number of years for which you reenlist. (For a reenlistment which will extend your total active federal service beyond 20 years, only that number of years or fraction of a year which, when added to your previous active service, total 20 years, is used as a multiplier.)

The cumulative amount of reenlistment bonuses which you may be paid under Section 208 and any other authority for such a bonus, may not exceed $2000. This means that the total of reenlistment bonuses throughout your career is limited to $2000.

To compute your bonus, find your basic pay in the chart on page 8, then find the line in the above table which applies to you.

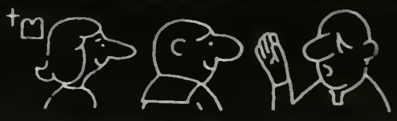
How Reenlistment Bonus Works

To show how the table works, let's see how Joe, Bill and Sam Doakes' bonus payments were computed:

- Joe is a PO2 (pay grade E-5) with more than two, but less than four years' service, which means his monthly basic pay is $163.80, according to the chart on page 8. Now, to find out how to figure his bonus, check the table above and you'll find he's entitled to one month's basic pay for each year of reenlistment. Thus, since he'll be reenlisting for six years, we merely multiply $163.80 by six to get our total of $982.80.
- Bill is a PO1 (pay grade E-6) with over 10, but less than 12 years' service, so his monthly basic pay is $234.00. This will be his second reenlistment, so according to the table above, he gets 20 days' basic pay for each year of reenlistment. Therefore, he'll get two-thirds of $234.00 (or $156.00) multiplied by six (the number of years for which he's reenlisting)—a total of $936.00.
- Sam, a CPO (pay grade E-7), has more than 14, but less than 16 years' service, so his monthly basic pay is $280.80. He's reenlisting for the third time, so he's entitled to one-third of $280.80 (or $93.60) for each year of his four-year reenlistment. That gives us our total of $374.40.

As you can see, the reenlistment bonus is easy to figure. In fact, about the only problem it creates is the pleasant one of deciding what you're going to do with all that lovely, lovely money.

assistance available

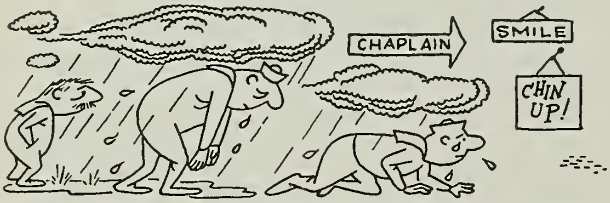


If you are worried about your own personal problems you can't keep your mind on your work. That's just one of the reasons why, when regulations permit, the Navy considers it good business to offer a helping hand whenever you are faced with a situation which requires expert help.

When you run into personal trouble you'll find a number of experts to help you. Listed below are some of the services and assistance available from the Navy and other sources. Each is well qualified to aid you.

Your Navy Chaplain

The fact that Navy chaplains are clergymen in uniform makes them concerned about any personal problems that naval personnel and their dependents may have. Navy chaplains are not only ready to accept the traditional practice of "taking your trouble to the chaplain," but they also work to bring comfort, courage, and faith, which are the fruit of a religious belief, into people's lives.



When a difficulty arises, the chaplain, in addition to providing spiritual assistance will refer you to the specialists capable of meeting your specific problem. The ministrations you receive from your home church are continued by your chaplain; the Sacraments of the Church, visits, counsel, assistance in emergency, instruction in living, help at time of sickness or death. He is concerned and interested in you both in times of trouble and when there is smooth sailing.

The chaplain is available to perform marriage ceremonies. If you are planning marriage, it is advisable for you to confer with the chaplain in advance.

The chaplain is the personal representative of every Navy and Marine Corps family, in spiritual matters. At times, and upon invitation, of course, he will visit your home. He can give counsel and advice to the widows and parents in case of a Navyman's death, and is available to conduct appropriate funeral services for Navymen (active and retired) and for their dependents.

Navy's Legal Assistance Program

The purpose of the Legal Assistance Program of the Navy is to interview, advise and assist Navymen and their dependents who have personal legal problems, and, in certain cases, to refer thm to competent attorneys acting in cooperation with the American Bar Association, state and local bar associations and legal aid organizations.

The Navy has established billets for Legal Assistance Officers, who are naval officers. Each Legal Assistance Officer is also a member of the bar of a state, territory or the District of Columbia. Legal Assistance Officers are established at naval district headquarters, navy yards, naval stations, Marine Corps bases, Marine barracks and other naval activities where qualified lawyers are available. Legal Assistance Officers are also usually available on ships or stations having complements of more than 1000.

For smaller ships or stations with no licensed attorney on board, a naval officer is assigned collateral duty as Legal Assistance Referral Officer. As such, he can arrange for legal service, but is himself forbidden to give such advice or service.

Here's a point to remember. If you need legal advice, you may call in person for an interview with your Legal Assistance Officer without going through any chain of command. If you do not know where to find him, your personnel officer or chaplain can tell you.

All matters upon which you may consult your Legal Assistance Officer are treated confidentially. It is a strict rule that such confidential matters will not be disclosed by personnel of the legal office to anyone, except upon your specific permission—and that such disclosures may not lawfully be ordered by any superior naval authority.

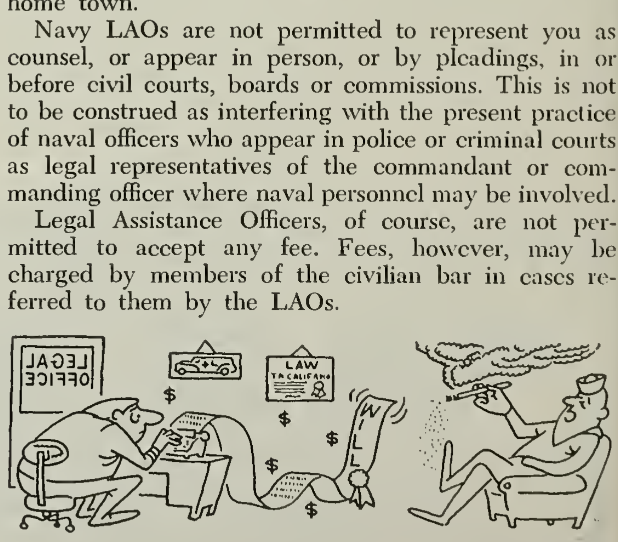
How the LAO Can Help—The type of cases which Legal Assistance Officers can handle for you include the drawing of wills, powers of attorney, deeds, affidavits, contracts, and many other documents. Matters relating to automobile sales and licenses, and cases where a landlord may be attempting to evict your family during your absence and similar troubles are legitimate reasons for dropping in to see your LAO.

Legal Assistance Officers also deal with cases of transfer of property, questions of marriage and divorce, adoption of children, administration of estates, insurance, citizenship, insanity, taxation, personal injury, and various cases in which the Soldiers' and Sailors' Civil Relief Act of 1940 may be invoked for the protection of service personnel or their families.

Navymen may also go to see an LAO of another military service. For example, a sailor on leave in the Midwest, who has a legal problem, may drop in to see the LAO at an Air Force or Army base near his home town.

Navy LAOs are not permitted to represent you as counsel, or appear in person, or by pleadings, in or before civil courts, boards or commissions. This is not to be construed as interfering with the present practice of naval officers who appear in police or criminal courts as legal representatives of the commandant or commanding officer where naval personnel may be involved.

Legal Assistance Officers, of course, are not permitted to accept any fee. Fees, however, may be charged by members of the civilian bar in cases referred to them by the LAOs.



LAOs do not handle matters which should, in their judgment, be handled by private counsel. LAOs are also constantly warned against handling questions of family allowance, matters involving transportation of dependents, complaints of non-support and similar cases. Such matters should be referred by you to the appropriate bureau or office.

In no case will a Legal Assistance Officer act as a collection agency or lend his aid to defeat fair collection or legal enforcement of any just debt or obligation.

Details of the Navy's Legal Assistance Program may be found in SecNav Inst. 5801.1.

The Navy Relief Society

The Navy Relief Society is a private organization, supported entirely by private funds, which assists Navymen and Marines and their families in time of need. It is not an official part of the Navy but is closely affiliated with it and operated exclusively in the field of relieving emergency distress among naval personnel and their dependents. While its assistance is not a benefit or right, it is the Navy's own organization for taking care of its own people, is manned largely by naval personnel, and is supported by the contribution of those in the naval service.

In order to insure equal consideration of all requests for assistance, definite policies and practices have been developed. Basic to these is the fundamental concept that Navymen are normally independent, self-reliant, and self-supporting people, but owing to the nature of service life with its many changes they are subject to a greater extent than persons in civilian life to unforeseen problems. It is in these situations that the Society stands ready to relieve. Its services are available to all personnel, both Regular and Reserve on active duty (other than training duty), to retired personnel and to the dependents of those whose death occurred while in the service. There should be no hesitation in seeking its aid in time of real trouble.

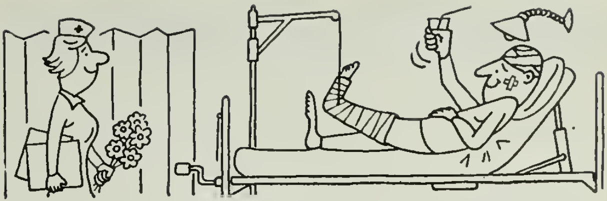
Assistance may be in the form of financial aid, which may be given as a loan (no interest is ever charged), grant or combination of both. Non-financial services are also provided.

The work of the Society is decentralized among 48 auxiliaries and 57 branches. Auxiliaries are located at the headquarters of naval districts, at naval stations, at the larger Marine Corps posts and stations, and at the centers where naval families congregate.

Branches are located at smaller stations within reasonable distance of the larger ones. All of these auxiliaries and branches maintain offices which are easy to reach and are open during normal working hours. In case of necessity, some of the staff can usually be reached at night.

If an auxiliary or branch is not available, write or telegraph requests to: Headquarters, Navy Relief Society, c/o Navy Department, Washington 25, D. C.

If the need is immediate and urgent, written or telegraphic requests should be processed through the local chapter of the American Red Cross, which will assist in insuring that sufficient information is included.



Information on assistance and services available from the Navy Relief Society is given in BuPers Inst. 1747.1A.

The American Red Cross

The American Red Cross is authorized to conduct a program of social welfare which includes financial assistance for naval personnel, medical and psychiatric case work and recreation services for the hospitalized. It is an authorized medium of communication between families of naval personnel and the Navy. It performs services in connection with:

- Dependency discharge and humanitarian transfer. —The Red Cross can and will assist in gathering the necessary affidavits required by Art. C-10308, *BuPers Manual*, when applying for dependency or hardship discharge.
- Emergency leave and leave extensions.—In emergency situations, where leave or leave extensions are required a commanding officer may request Red Cross assistance to investigate and verify facts.
- Family welfare reports—The Red Cross receives information from lawyers, physicians, clergymen and others who know the personal situation of the applicant and which may be assessed in view of the request made.

Navy Mutual Aid Association

The Navy Mutual Aid Association is a nonprofit association established in 1879, under the auspices of the Secretary of the Navy, to provide immediate aid to the dependents of deceased officer personnel in the form of a substantial cash payment anywhere in the world, and to secure pensions and other benefits for the dependents of its members.

Membership is open to Regular and Reserve officers of the Navy, Marine Corps and Coast Guard on the active lists who are not more than 62 years of age

and all midshipmen and cadets of the Naval and Coast Guard Academies. Reserve officers must be on active duty at the time of entrance into the Association and must have one year's continuous active service or one year or more of obligated service at the time of application. The benefits of the Association are available when a member retires, resigns or is in an inactive status.

The Association acts promptly upon receipt of the official notice of a member's death ($1000 is sent immediately without waiting for proof of death so the dependents are not left stranded without funds). furnishing forms and assisting the surviving dependents in the preparation, submission and follow-up of government claims.

It also offers numerous other services to its members. For example, membership in the Navy Mutual Aid Association entitles a member to obtain quick loan service anywhere in the world, provides a central depository for valuable documents and free photostatic service.

The premiums for the $7500 benefit vary with the age of the member and become fully paid-up at age 50, 55, 60 or 65, depending on the plan selected. A low cost Ordinary Life plan is also available. The Association pays a terminal dividend of $1000 in addition to the $7500 at the present time. For example, a man joining the Association at age 23 pays $10.35 a month and his payments stop at age 60. In the event of his death at any time, his beneficiary would be paid $7500 plus the terminal dividend of $1000.

Navy Wives Club

The Navy Wives Clubs of America is a group that has been especially organized for the Navy wife. It has 67 active clubs throughout the U. S. and in overseas locations including Alaska, Hawaii, Puerto Rico, Cuba, French Morocco, Japan, Guam and the Philippines, and several with charters pending.

Membership in the NWCA is composed chiefly of wives of enlisted men serving in the U. S. Navy, Coast Guard and Marine Corps and in their Reserve components. Other members are wives of EMs who have been honorably discharged or are retired or in the Fleet Reserve, and women who are friendly to and interested in the cause of furthering such an organization of mutual assistance and social welfare.

In addition to its many beneficial and social activities, the NWCA also sponsors a special college scholarship fund for children of enlisted personnel.

The Navy Wives Club members also provide assistance to Navy chaplains, assist in YMCA programs for servicemen, participate in the national blood donor program and in Navy Relief Society projects. Socially local chapters hold dances, picnics, and similar affairs.

If no local chapter exists in the area in which you now live and your wife is interested in establishing such a chapter, she may find help in its organization by addressing a request to the Chief of Naval Personnel (Attn: Pers G221), Washington 25, D.C.

Other Organizations

There are a number of organizations and government agencies which will assist your family. Following is a brief discussion of some of these agencies:

Veterans Administration—Handles dependency compensation for service-connected death and pension for nonservice-connected death. The VA is responsible for burial flags for dependents of personnel buried outside the continental U. S. It administers USGLI and NSLI insurance. The VA maintains hospitals for care of veterans who cannot afford to pay for hospital treatment. VA Regional Offices are located in many large cities.

Veteran Organizations—The American Legion, Veterans of Foreign Wars (VFW), American Veterans of World War II (Amvets), Disabled American Veterans (DAV), Fleet Reserve Association and certain other veterans' organizations will assist by providing information and helping process claims.

State Veterans Commissions—Most states maintain veterans' agencies (usually called State Veterans Commissions) which supervise veterans' programs. They can help with federal employment assistance, state bonuses —if any, education assistance, land settlement preference and other benefits.

BuPers Casualty Branch—Provides counsel and aid to survivors of naval personnel. For additional details see section on survivor's benefits.

Emergency Leave and Transfer and Assignment for Humanitarian Reasons

The Navy recognizes that there are occasions when a personal problem cannot be solved in your present duty status and will give consideration to individual requests for the following:

- Emergency leave may be granted by your commanding officer when home conditions require your immediate presence; or
- Reassignment for humanitarian or hardship reasons when home conditions constitute an undue hardship not normally encountered by other members of the naval service and your presence is necessary to alleviate the hardship. This assignment may be for transfer from Fleet to Fleet, sea to shore, shore to shore, shore to sea, temporary or permanent. Normally, a temporary assignment to shore duty is for a period not to exceed four months.
- When leave has already been granted to meet an urgent situation and it is probable that your remaining time will not be sufficient, you may submit a request for an extension of leave, or for a special humanitarian assignment to the Chief of Naval Personnel via the commanding officer of the naval activity nearest your leave address.
- In emergency cases, when temporary humanitarian assignment is insufficient, you may request an extension of your assignment accompanied by an explanation of the current situation. All requests for humanitarian assignment are carefully reviewed. In addition to the merits of your case, your service record, length

of service and other extenuating circumstances are considered.

Information on procedures are given in BuPers Inst. 1306.24A. You may be assured that you will receive all possible assistance and guidance from your commanding officer or from your chaplain in the preparation of humanitarian requests.

Requests for hardship or dependency discharge must be submitted in accordance with the provisions of the *Bureau of Naval Personnel Manual,* Article C-10308, and must be accompanied by affidavits which fully substantiate the dependency or hardship claim.

Additional information as to disposition of applications for separation for dependency or hardship reasons is given in BuPers Inst. 1910.8.

Uniformed Services Identification and Privilege Card

The armed forces have developed a new ID and privilege card, DD Form 1173. The card will show photograph, identification data, service and status of sponsor, and will list authorized patronage, such as theater, commissary, and limited or unlimited Exchange privilege.

Medical care authorization will be noted on the card, with space for civilian or uniformed services notation.

i.d. card

How dependents get the card:

- *Active duty* Navymen apply to the commanding officer, on behalf of the dependents.
- Retired personnel apply to the Commandant (or other custodian of records) on behalf of dependents.
- Survivors (or the agents) of deceased Navymen should state their request in writing to the Chief of Naval Personnel (Attn: Pers G2), Department of the Navy, Washington 25, D. C.

If the names of your wife and children, listed on the application for a DD Form 1173, *Uniformed Services Identification and Privilege Card,* are the same as those listed on your *Record of Emergency Data,* DD Form 93-1 (see page 77), you should have no difficulty in obtaining the new card. If your DD 93-1 is not up to date (for example, if a child has been born since you last completed a DD 93-1), it will be necessary to show proof of the changes (the child's birth certificate, for example). Keep your DD 93-1 up to date.

DD 1173 becomes effective 1 Jul 1957 and supersedes the Military Dependent Identification Card (DD Form 720) as well as the Dependent's Identification Card for Medical Care (NavPers Form 1343).

transportation - tips on travel

If you're a single man, this chapter will hold little interest for you. It's primarily directed to the man with a family who has received his orders for overseas duty and is planning to have his wife and youngsters accompany him.

As you no doubt know, the Navy will assist your family (they're called "dependents" in most official Navy publications) to follow you on permanent change of station orders. This privilege is available if you are in pay grade E-4 or above, with more than four years' service.

The theory is, of course, that you'll be happier living at home, no matter where that home may be, than living out of a sea bag. That's why the government is willing to pay a major portion of your moving expenses for transportation of your family and household effects to your new duty station.

Overseas Travel

If you're planning to set up housekeeping at one of the naval overseas bases, you and your wife will undoubtedly have a lot of questions about the steps that must be taken before actually getting underway.

- The first step must be taken by you. You must complete the "Application for Transportation for Dependents" (SandA Form 33 or DD 884) and have it approved by your commanding officer.
- The next step is to make a request by letter or dispatch via your commanding officer to the area commander concerned with approval of entry of dependents, if such approval is required. At the present time, previous approval is not necessary for your family to enter the United Kingdom, France, Italy, or Hawaii. Entry into those areas is authorized with the understanding that government housing is not available and commercial housing may be obtained. For all other areas, a dispatch or letter should be sent to the area commander with information copies to your new duty station and/or the Chief of Naval Personnel, the Commandant, Twelfth or Thirteenth Naval District.

When your family's entry has been approved by the area commander, then the way is open to complete the further necessary arrangements.

For information on living conditions at your overseas station, check page 13 to see about available pamphlets giving up-to-date reports on various areas.

If your wife requires any further assistance she should contact the Bureau of Naval Personnel or the appropriate naval district handling dependents' transportation to the overseas area.

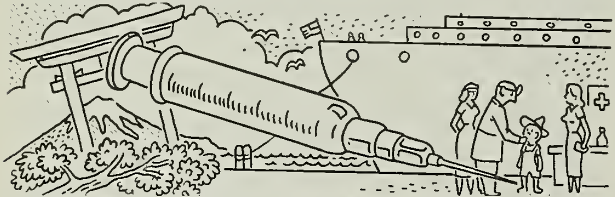
After the "Application for Transportation for Dependents" has been approved and the area commander concerned has approved your dependents' entry, your wife will receive (at the address given in your application) application forms from the Bureau and in-

structions to be used in applying for a passport, if one is required, and a copy of "Overseas Transportation Information for Navy Dependents," NavPers 15842-A.

Passports

The application for passport should be completed as soon as possible. If your family does not live near Washington, D. C., where they can make personal application to the Bureau of Naval Personnel, they should:

- Make application personally to a clerk of the nearest United States Court or clerk of a state court authorized to naturalize aliens (this, of ocurse, does not mean your dependents are aliens).
- They should take with them appropriate identification together with the Navy's authorization for them to travel abroad. They must submit proof of United States citizenship.



- Each one must submit two recent photographs, full face without hat, size 2½-by-2½ inches to 3-by-3 inches. Minor children may be in a group picture with the mother.
- When they apply for the passport, they should be accompanied by two witnesses who have known them for at least two years.
- Allow three weeks to one month for the clearance of the passport application through the Department of State.

The passport applications will be forwarded by the clerk of the court of passport agency to the Passport Division, Department of State, Washington, D. C., for action. For those traveling to the Pacific area, the passports will be forwarded to the Commandant, Twelfth Naval District, District Passenger Transportation Office, San Francisco, Calif., for delivery at time of sailing. For those going to Europe and areas other than the Pacific, the Bureau of Naval Personnel will forward the passports to the latest address furnished by you. If your family has moved since you gave an address in SandA Form 33 ("Application for Transportation for Dependents"), you should immediately notify the Chief of Naval Personnel (Attn: Pers-B315), Navy Department, Washington 25, D. C.

Physical Examination

All dependents must receive a physical examination before departure and obtain a signed medical certificate from a qualified physician in private practice, or a medical officer of one of the military services or the Public Health Service, attesting their general good health and freedom from communicable diseases. This is to protect their own health as well as that of fellow passengers aboard ship, and must be kept in the dependents' possession until they arrive at their destination. An examination and certificate is required for each of your children and should be obtained before departure from home.

It is desirable, but not essential, before beginning the trip, that a miniature chest X-ray test be a part of the physical examination, with a large film made if signs of disease are found.

An added personal advantage is to have an accompanying tuberculin skin test. The size of the test dose, its result and the X-ray interpretations should be recorded on the medical certificate.

After arrival at the port of embarkation, your wife will be required to complete a "Pre-Embarkation Certificate," DD Form 625, for herself and your children within 48 hours of actual embarkation, covering illnesses or injuries suffered within 60 days before embarkation, and pregnancy, if applicable. All children six years of age or younger will receive a physical examination at the port of embarkation.

Immunizations

Certain immunizations are required for your family's protection. Inoculations are most easily arranged at time of the family physical examinations. Since some immunization series take up to four weeks to complete, it is advisable that enough time be allowed for full immunization before beginning travel to port of embarkation. Completion of the immunizations should not be delayed until arrival at the port of embarkation as no one will be permitted to travel overseas without them.

Immunization may be performed by a medical officer of one of the military services or the Public Health Service or a physician in private practice. A signed certificate, the "International Certificate of Vaccination of the World Health Organization" (Form PHS 731), showing each type of immunization received, and properly signed and authenticated by your doctor or medical officer, is required. It must be kept in the owner's possession all the time. Do not mail it to the Bureau of Naval Personnel as evidence of completion of immunization. The Navy will be satisfied with your wife's statement to that effect.

- No matter where you may be stationed overseas, standard inoculations are required and they must be completed before the family leaves home. Current requirements and dosage information can be obtained from any armed forces activity and the following are only for general information.

Smallpox: Inoculation must be taken within 12 months of embarkation regardless of age. The result must be entered on the certificate.

Typhoid: For all over six months of age—initial series of three injections or a booster injection, taken within 12 months.

Tetanus: For all over six months of age—completed initial two-dose injection taken within 12 months or the booster injection taken within past four years if the initial three-dose series had been completed before that time.

Diphtheria: For children six months to 15 years of age—initial three-dose, or booster dose taken within past three years, or evidence of immunity.

Poliomyelitis: All dependents are urged to have at least the first two injections of poliomyelitis vaccine before going overseas.

- ***Special Requirements:*** Persons under 35 years of age going to Europe or the Mediterranean region (including North African ports), must be immunized against diphtheria if positive to the Schick skin-test. (Immunization is advisable for such positive persons under 45 years of age going anywhere outside the North American continent.)

Cholera: Initial series or booster injection within six months for all six months of age or over going to an area of prevalence.

Typhus: Same as for cholera.

Yellow Fever: Immunization within six years of all persons six months of age or over going to an area of prevalence. In addition, immunization not less than 12 days or more than six years ago is required by local government regulations for all persons going to or through Pakistan, India, Ceylon, Canal Zone, or British West Indies.

Whooping Cough: For all children between six months and five years.

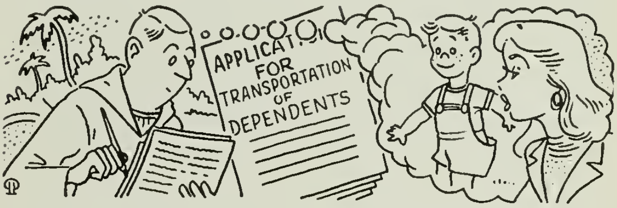
The immunization requirements should not be considered as a substitute for rigid personal and general sanitary hygiene which is necessary in all countries. Travelers will be instructed en route or after arrival by medical officers as to the sanitary measures necessary in the conduct of daily life in their new locations.

Pregnancy

Navy Department policy prohibits travel by Military Sea Transportation Service vessels of women pregnant beyond the sixth month. This is for the protection and safety of the prospective mother. A signed statement by a medical officer of one of the military services or the Public Health Service or other reputable physician, attesting the duration of pregnancy must be forwarded to the Chief of Naval Personnal (Attn: Pers B313) Navy Department, Washington 25, D. C. It is suggested that your wife take with her a signed duplicate copy of this statement.

Only infants over six weeks of age will be transported via MSTS vessels, and only providing the mother has recovered her strength sufficiently to care for the child.

- ***Notification:*** Dependents are requested to advise the Chief of Naval Personnel (Attn: Pers B-313) Navy Department, Washington 25, D. C., when they have complied with immunization and health requirements. A definite reservation on a particular sailing will not be made until the notification set forth above and the notification of forwarding the dependents' passport application have been received in the Bureau.


APPLICATION FOR TRANSPORTATION OF DEPENDENTS

Transportation Arrangements

After the Bureau of Naval Personnel has been advised that your family is ready to depart on or after a certain date, they will be booked on the first available ship sailing after that date. Dependents will be notified that space is offered to them on a certain vessel departing from a certain port. They will be given a time limit in which to write or wire acceptance of this offer. The reply should be sent to: Chief of Naval Personnel (Attn: Pers-B313). (Do not write or wire the person who signed the letter offering the space.)

If your dependents are not legally entitled to transportation, and they have been authorized to travel via MSTS to your duty station, it will be necessary for you or your dependents to assume the cost of all necessary travel to the port of embarkation and from the port of debarkation to your ultimate destination.

If you are legally entitled to transportation for your dependents at government expense within the United States and they are located at a place where the cost of transportation would be greater than that to which they are legally entitled, it will be necessary for them to travel at their own expense. After their arrival at their destination you may claim reimbursement to the extent to which you are entitled.

If you are legally entitled to transportation for your dependents at government expense within the United States and your family is located at a place from which the cost of travel would NOT be more than to which legally entitled, government transportation requests will be forwarded to your wife provided she requests them. If you do not want transportation requests furnished, your family may perform the overland part of their journey at your expense. You may then claim reimbursement for their travel *after* they arrive.

when your family travels

Baggage

The amount of baggage dependents may take into their stateroom on board ship is limited. Not more than two pieces of cabin luggage (standard handbags) will be permitted aboard as cabin luggage for each person 12 years of age or over. Children under 12 years of age are limited to one handbag. In addition, a small case for toilet articles may be carried as cabin baggage. Foot lockers in cabins are prohibited. Only standard luggage, such as trunks, foot lockers, suitcases, etc., will be accepted as hold baggage. Boxes and crates must be shipped as (and with) household goods. The current allowance for hold baggage is 350 pounds for each passenger 12 years of age or over, and 175 pounds for each child under 12.

The railroads have granted a baggage allowance of 350 pounds for each full fare and 175 pounds for each half fare for trans-Atlantic and trans-Pacific passengers. Any weight in excess of those amounts will be subject to excess charges levied by the railroad. These charges will not be at government expense and must be borne by the traveler. Dependents must make arrangements for baggage delivery at the port of embarkation.

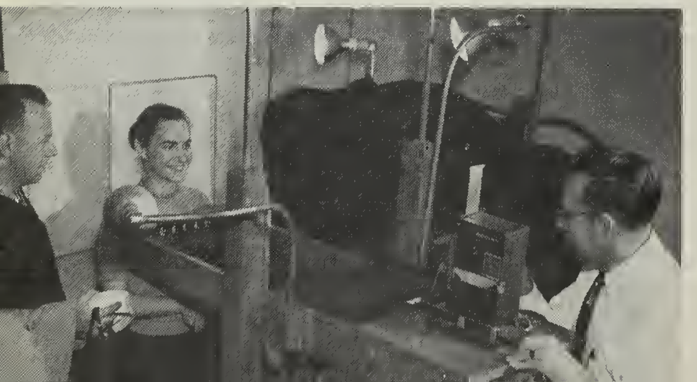
Usually the railroad can assist the traveler by furnishing special delivery baggage checks at nominal cost, which will provide for the transfer of the baggage (checked on your railroad tickets) from the railroad terminal at the port to the pier where it will be loaded aboard ship. Important points to remember are:

- If your dependents should ship via railway express, they must be certain that the shipment is fully prepaid. No baggage should ever be sent C.O.D.
- All baggage should be clearly marked to insure proper identification. A tag with the following information must be secured to each piece of baggage: name (dependent's name); home address; vessel's name; sailing from (port pier, number if known); sailing date; ultimate destination; and type of baggage (cabin baggage or hold baggage).
- In any event, the traveler must be sure to ship baggage in sufficient time to arrive not later than *five days before sailing.*

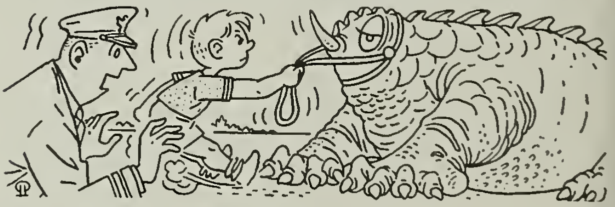
On Board Ship

Passengers traveling in MSTS transports are subject to the rules and regulations issued by the Commander, Military Sea Transportation Service. These rules, copies of which are furnished each passenger upon embarking, were established for the safety and comfort of all persons on board. Parents are held directly responsible for the control of their children at all times.

Consideration for other passengers dictates that children should not be permitted to be noisy or destructive. Passengers are required to remain in those parts of the ship set aside for their use.



- Accommodations: MSTS transports are assigned by Military Sea Transportation Service representatives at the port and are adequate for the dependents' needs and comfort. Special care is accorded mothers traveling with children.
- Assignment of cabin space will be alloted on a basis of number of passengers on board. Cribs are provided for infants.
- Laundry facilities aboard ship are limited. A supply of disposable diapers for infants should be packed, since the ship's supply may not be adequate.
- The ship's store usually sells candy, cigarettes, talcum, baby oil, safety pins and other personal items. It is recommended, however, that your wife carry such items considered necessary rather than rely solely on ship's store merchandise.
- Recreation facilities include library, movies, lounge, and certain specified deck spaces. Children using recreational facilities or attending recreational programs must be accompanied by a responsible adult.
- Mess charges: The only charges for the dependents of officers and enlisted men of all grades are for meals and occasional nominal charge for laundry. Payment on MSTS transports for meals will be required on boarding or immediately before boarding. Maximum rates currently in effect but subject to change are as follows:



(1) Adults, and children six years of age or older; approximately $1.75 per day.

(2) Passengers traveling on a *space available basis* will be required to pay MSTS a nominal fee to cover their subsistence and surcharge necessary to defray additional operating costs such as laundry, wear and tear on linens, dishes, etc. Children under six years of age travel for one-half the adult rate.

Personal checks will not be accepted on MSTS transports; travelers' checks and cashiers' certified checks are acceptable, but U. S. currency is preferred.

- Diets: There are no adequate facilities aboard the ship for the preparation of special diets for adults. In the case of infants' diets, ships have a supply of standard baby foods in stock.
- Clothing: Dress on board an MSTS transport should be limited to the semi-tailored type of suit or dress as the acceptable practical attire. Full-length slacks have proved to be the most practical attire on the windy decks of a transport. This type is permitted in the passenger messes. Add scarves, hair nets, low-heeled rubber-soled shoes or rubbers, and finally a sweater and light raincoat for greater comfort on windy, and often wet, decks.
- Health: There are adequate medical and dental facilities for emergency treatment aboard commissioned (USS) transports, however, non-commissioned (USNS) transports do not have dental officers on board. The

medical facilities will have an ample stock of standard drugs.

- Dental treatment: Dependents will receive dental service only in emergencies on board ship.

Before leaving the continental limits, your family should receive a dental examination to make sure they will probably not require dental treatment while at an outlying station.

- Pets: You'll do well to leave your pets at home. If it's really essential that Junior bring Rover along, you'll find yourself involved in more problems and regulations than the travel of all the rest of your family. If it's essential that transportation be provided, the port representative can give you the details.

Arrival at Overseas Port

When the ship arrives at the port debarkation overseas, passengers will be met by representatives of the area commander, and in some instances by representatives of the community where you will reside.

Where rail travel is used, day coaches are provided for journeys of short duration during the daylight hours, and sleeping cars for overnight trips. The military will try to move your family from the port of debarkation to their new home as quickly as possible, but where transportation facilities are limited, they may have to stay overnight at the port.

It is advisable that your family have sufficient funds in U. S. currency to meet unforeseen expenses that may arise, or expenses incident to awaiting transportation from the port of debarkation to destination.

Free Transportation at Isolated Bases

Navymen (and their dependents) serving at 15 isolated overseas bases are authorized to one round trip by air to a nearby large city or country during their tour of duty.

Each serviceman will receive one such trip during a normal tour of duty at this remote spot. The time will count as leave.

All transportation will be on a space available basis.

Men may be accompanied by dependents; however, their dependents cannot travel unless the serviceman accompanies them.

The areas affected and location you may visit are:

- *Saudi Arabia, French Morocco, Libya, Eritrea and Malta*—Trip authorized to Italy, France or Germany.
- *Turkey*—Trip authorized to Italy, France, Germany, Cyprus, Lebanon or Egypt.
- *Greece and Yugoslavia*—Trip authorized to Italy or Germany.
- *Azores and Iceland*—Trip authorized to United Kingdom, Europe.
- *Narsarssuak and Goose Bay*—Trip authorized to St. Johns, Newfoundland, Montreal or CONUS.
- *Adak and Kodiak*—Trip authorized to Anchorage, Alaska.
- *Johnston and Midway*—Trip authorized to Hawaii.
- *Kwajalein*—Trip authorized to Tokyo, Manila or Hawaii.
- *Korea, Iwo Jima, Guam and Formosa*—Trip authorized to Tokyo, Manila or Hong Kong.
- *Ft. Churchill*—Trip authorized to Winnipeg or CONUS.
- *Indochina, Cambodia and Thailand*—Trip authorized to Tokyo, Calcutta or New Delhi.
- *Paraguay*—Trip authorized to Canal Zone, Rio de Janeiro, Buenos Aires, Montevideo, Santiago or LaPaz.

- *Iran, Iraq and Ethiopia*—Trip authorized to Italy, Germany, France or Egypt.
- *Pakistan*—Trip authorized to Italy, Germany or France.
- *Moscow*—Trip authorized to Germany, France or Italy.

It is emphasized that all personnel, regardless of rank or rate, will be given equal opportunity to take advantage of the round-trip travel. However, persons taking advantage of the program must sign a "certificate of personal gain and remuneration" stating that they will not bring along articles for resale.

Although the Air Force provides the majority of the flights for this vacation, Navy planes also operate in the schedule.

Dependents' Travel Within the United States

There are three basic types of permanent transfers between duty stations in the U. S. in which transportation is authorized for your family or other dependents. These are: A change of station from one shore activity to another; a transfer from shore activity to a ship; and a transfer from a ship to a shore activity. In each of these cases, there are certain choices open to you concerning your family's destination and method of travel.

For your dependents to be eligible for transportation at government expense you must be an E-4 (with more than four years' service) or above, and the orders must be for a permanent change of station. Transportation of dependents is authorized under temporary duty orders only when you are given temporary duty for more than 20 weeks and your orders do not provide for return to your permanent station upon completion of duty.

Let's take a look at the methods of travel available within the United States for your family.

- ***Station-to-Station***—The easiest method is simply to request the Navy to furnish transportation from your old to your new duty station. In that case, regardless of the size of your family, you submit the request to your disbursing officer who in turn issues you a transportation request. This is turned over to the railroad, airline, or bus carrier in exchange for the tickets for you and your dependents. Couldn't be easier.

You may want to drive your car to your next duty station or travel by other means. In such a case you pay your own expense, then ask for reimbursement.

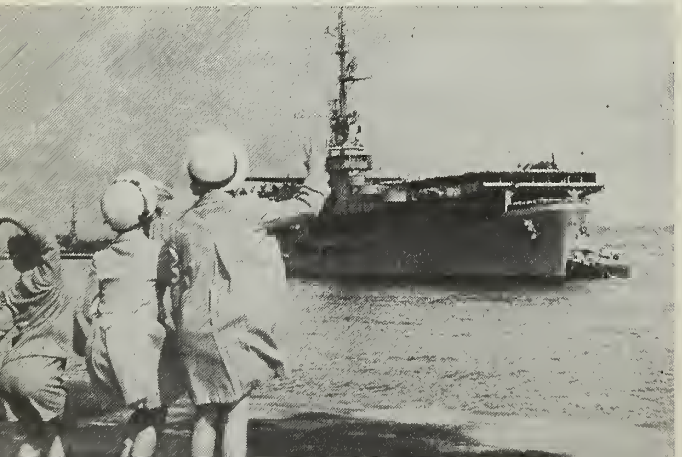
Under this system you get six cents a mile for your own travel, and a specific rate of payment for each dependent. This is set so that you can get up to a maximum of 18 cents per mile for your family to travel, plus the six cents a mile for yourself. Here is a breakdown of how that is figured.

You get six cents per mile for each dependent 12 years of age or over, not to exceed two such dependents; plus three cents per mile for each dependent five years of age and over but under 12 years of age. Total for dependents is not to exceed 18 cents per mile.

However, there are some situations in which your dependents are not restricted to transportation only to your next permanent station. For example, in transfers from one shore activity to another shore activity, your dependents may follow you to your new duty station, or should your wife decide it would be better to return to your original home, or some other locality within the United States, you would be entitled to transportation at government expense at a cost not to exceed the amount to which you would have been entitled had she traveled to your new station.

- ***Shore-to-Ship***—Upon transfer from a shore station to a ship you have three options which you can exercise when it comes time to move your dependents. (1) They may go from your old shore station to either the home yard or the home port of the ship; (2) they may go from a place other than the old shore station to either the home yard or home port of the ship, or (3), they may go from the old shore station to some other spot. However, in all three cases the cost may not exceed that to which they would have been entitled had they performed the travel from the old shore station to either the home yard or home port, whichever is greater.

- ***Ship-to-Shore***—In the event of a transfer from a ship to a shore station you again have three options on the travel to be performed by your dependents. (1) They may go from either the home yard or the home port to the shore station; (2) they may go from a place other than the home yard or home port to the shore station or (3), they may go from the home yard or home port to a place other than the shore station. In the last two options the cost must not exceed that to which they would have been entitled had they gone from the home yard or home port of the ship to the new shore station.



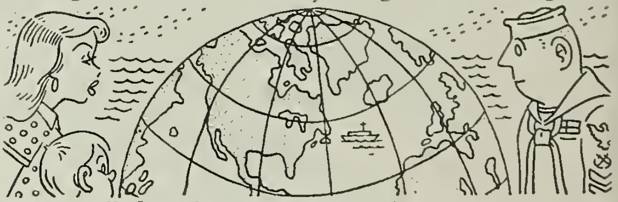
While the transfers outlined above are the ones with which you will be primarily concerned, there are other instances in which your dependents rate transportation. If, for example, you are hospitalized at your permanent station and then transferred to another hospital, your dependents are entitled to transportation to the new location as though it were a permanent change of station provided the CO of the hospital certifies that the period of treatment can be expected to be prolonged.

When your ship changes either its home port or home yard, your dependents can be moved at government expense, as though it were a regular move between stations.

Regulations on Dependents Travel

As stated earlier, regarding travel by your dependents, the government pays their transportation for the purpose of establishing a residence only.

That is, just because you are undergoing a permanent change of station, your family is not permitted to go driving around the country at government expense, visiting all the relatives they haven't seen in years.



It has been pointed out that a number of instances of checkage of a man's pay have resulted through carelessness in following the travel regulations.

Requirements relative to the establishment of a bona fide residence evidently have not been made clear, with the result that the General Account Office continues to find many incorrect and some fraudulent claims being submitted. (The mere fact that the GAO takes exception to a claim, however, does not necessarily mean that a fraudulent claim has been submitted. Further facts and investigations may reveal that the claim is actually valid. In such cases a new claim, setting forth the circumstances of the travel, may be submitted to the Chief of Naval Personnel.)

To insure that all personnel are fully aware of their rights and duties in connection with possible repayment of dependents' travel costs, the Chief of Naval Personnel has directed that all hands be thoroughly briefed on the requirements with emphasis on the following:

- Claims for reimbursement for transportation of dependents should not be submitted until the travel has been completed. However, transportation in kind may be furnished dependents.
- Payment is dependent upon actual performance of travel for the purpose of establishing a residence. Reimbursement is not authorized for pleasure trips, business trips, visits, etc.
- The claim should correctly reflect the points and dates of the travel performed for which reimbursement is claimed.
- Reimbursement may be claimed only for bona fide dependents.

Each time you submit a claim you should bear in mind that you are fully responsible for the completeness and accuracy of all statements of facts.

dependents schooling

When you are about to take school-age children overseas with you for the first time, you'll probably wonder how the change will affect their education. However, there's little cause for worry since chances are that your youngsters, whether they're first graders or high school seniors, will receive as good an education overseas as they would in the States.

While you are stationed at an overseas base, any unmarried child, stepchild, or adopted child who is actually dependent on you as a parent, and who will have reached his sixth but not his 21st birthday by 31 December of the school year currently in progress, is eligible for educational assistance up through the high school level, at the expense of the U. S. Navy. These dependents may attend:

- Navy-maintained schools.
- Schools operated by other service branches.
- Schools operated by local civilian agencies (church, governmental or private).
- Or, they may take correspondence and home study courses.

Naturally since the purpose of dependents schooling overseas is to keep the Navy family together, appropriated Navy funds will not be used to provide schooling that requires your child to live away from home.

Where a Navy-maintained school is established, naval personnel attached to the activity maintaining the school, or stationed within a reasonable daily commuting distance, are expected to send their dependents to that school. At activities where Navy-maintained schools are not available, you will be expected to send your dependents to any schools maintained by the Army or Air Force in the immediate vicinity. However, you may send your dependents to other schools, even though there is an armed forces school available, if you bear the expense without assistance or reimbursement from Navy funds.

The Navy has Stateside-style schools for its young globe-trotters at Argentia, Newfoundland; Kwajalein, Marshall Islands; Midway Island; Saipan, Mariana Islands; Chia Yi, Tsoying, Tainan and Ping Tung in Taiwan (Formosa); Sangley Point, Subic Bay and San Miguel, Luzon, P. I.; Yokosuka, Iwakuni and Sasebo, Japan; Trinidad, B. W. I.; Guantanamo Bay, Cuba; Naples, Italy; Port Lyautey, Morocco; and Rota, Spain. At other overseas bases the Navy makes the necessary inter-service financial arrangements so that its dependents can attend some additional 250 schools operated by the Army and Air Force in 15 countries.

Dependents high schools stress the fundamental subjects (English, arithmetic, history, etc.) because enrollment isn't large enough to warrant the cost of hiring teachers for a great variety of courses. However, pupils who want to study subjects not taught by the local armed forces school are able to take free correspondence course in these fields with teachers from the school helping them along in their work.

In Navy high schools your teenagers can find just about all the extra-curricular activities they would in the States—glee clubs, dances, school papers, bands and most athletics.

At small activities, such as Naval Missions and Military Aid Groups, you may find that there is no armed forces school around, but don't worry—your children will still be able to get their three Rs with the help of Uncle Sam. In situations like this the Navy will pay all or most of the tuition for your dependents to attend private, church, cooperative or local government schools if there are any within daily commuting distance of your living quarters. But, to make sure these schools are good enough, the Navy will not put up the money unless certain requirements are met.

The school must be willing to accept and able to accommodate your youngsters, the quality of instruction must be about equal to that normally provided in State-side schools, and the language of instruction must be English.

On the whole, private and church schools in foreign countries compare very favorably with the same sort of schools in the States. Cooperative schools (operated by groups of parents) have improved a great deal over those of the pre-World War II period. And, local government schools, except for their emphasis on subjects of special interest to natives of the country, are usually on a par with American public schools.

Even at activities which have no armed forces or tuition schools, the Navy will help out with your youngsters' education. When there are no suitable schools around, you can become a teacher yourself, using correspondence courses furnished by the Navy.

Unfortunately, the successful completion of correspondence courses does not guarantee that Stateside high schools or colleges will give credit for them. Accredited Navy dependents high schools are authorized to grant credit for the satisfactory completion of correspondence courses taken with the approval and under the supervision of the school, but if your activity has no accredited armed forces high school, it's best to check with the student's last Stateside high school, the next high school he will attend or the college he plans to enter, to see what arrangements can be made about the granting of credits. Some Stateside schools will give credit for correspondence study if the student can pass a test on the subject or if he does all right in more advanced study in the same field.

Here are two other pointers that should be helpful when you take your children abroad:

- Bring along their birth certificates so that you'll have no trouble proving they're in the right age brackets for Navy-financed schooling.
- If possible, also bring along—or have the previous school forward—transcripts of your children's schoolwork; narrative reports on their personality traits, study habits, etc.; lists of the textbooks they have been using;

and lists of their scores on standardized tests. These items are a great help in enabling your youngster to get the most out of his schooling.

Additional information about overseas dependents schooling can be obtained by writing to the Chief of Naval Personnel (Attn: Pers C-113) Navy Department, Washington 25, D.C., via official channels.

As a final note, it is suggested that you make all arrangements for schooling in accordance with instructions put out by the CO of the activity to which you are attached overseas. Do not make arrangements on your own: keep in mind that you cannot be reimbursed for money which you spend for your child's schooling.

War Orphans' Educational Assistance

Children of Navymen who died while on active duty during World War I, World War II or the Korean conflict, or who died from injuries or disease resulting from those periods of wartime service, are now eligible to receive government grants to further their education.

The War Orphans' Educational Assistance Act of 1956 (P. L. 634) offers monthly schooling payments to eligible children similar to those made to veterans under the G.I. Bill. The payments, which will cover up to a maximum of 36 months of schooling, are made to eligible persons beginning on the 18th birthday, or upon completion of secondary schooling (whichever occurs first), and ending on the 23rd birthday. However, payments will be extended beyond the age of 23 if the student was over 18, but under 23 on the effective date of the act; if his 23rd birthday falls in the middle of a semester or term; if he was over 18 when the parent died; or if his education was delayed because he was in service.

Government allowances of $110 a month are paid to students attending school full time; $80 for three-quarter time; and $50 for half-time attendance. The rate for "co-op" courses (alternating schooling and actual experience on a related job) is $90 a month.

Another important benefit of the new law is that it provides for payments of $110 a month for special restorative training for handicapped persons.

Scholarships for Your Children

There are a limited number of scholarships set up for the children of armed forces personnel. Through your service in the Navy, your son or daughter may possibly be eligible for one of them.

Full information on the provisions and numbers of the scholarships available may be obtained by writing to the Chief of Naval Personnel (Attn: Pers G212), Washington 25, D. C.

In addition to scholarships for your children by virtue of your service in the Navy, the Bureau also has information on many other scholarships available to any youngster of secondary school or college age.

moving household effects

The shipment of your household goods can be a very easy and carefree affair if you are familiar with the regulations and procedures involved.

When you're expecting a transfer, it would be wise if you obtain from your shipping officer a copy of the very useful pamphlet called *Household Goods Shipment Information* (NavSandA Publication 260). You'll find complete information in this pamphlet, which will assist you in many ways and also prevent inconveniences by knowing in advance just what's what in regard to shipping your household goods.

The weight allowances for transportation of household effects are:

	Temporary	Permanent
ADM	2,000	24,000*
VADM	1,500	18,000*
RADM (Upper Half)	1,000	14,500*
RADM (Lower Half)	1,000	12,000*
COMO	1,000	12,000*
CAPT	800	11,000
CDR	800	10,000
LCDR and WO (W-4)	800	9,500
LT and WO (W-3)	600	8,500
LTJG and WO (W-2)	600	7,500
ENS and WO (W-1)	600	7,000
CPO	400	6,000
PO1	400	5,500
PO2	400	5,000
PO3 (with over four year's service)	400	4,500
PO3 (if E-4 on 31 Mar 1955 with four years' service or less)	400	3,000

* Current year appropriation limits weight to maximum of 11,000 lbs. net.

These allowances are intended to represent the actual net weights of household goods authorized to be shipped at government expense. The temporary allowances are authorized under certain conditions when transferred under temporary additional duty orders, while the permanent allowance is authorized when you are transferred under permanent change of duty orders.

Here's a rundown of current regulations. It must be remembered that these regulations, like all others, are subject to change. Therefore, upon receiving your orders, you should question your shipping officer and get the latest word before making arrangements to ship your gear.

When any portion of your household effects are shipped by motor van, the allowance is increased five per cent and when shipped by rail or water, your allowance is increased 40 per cent. These increases are authorized to cover the added weight of materials used in packing.

A word of caution—If you ship more than you are allowed, you will be billed for the excess by the government. Moving household goods is very costly, so you should be careful not to exceed your weight allowance. Remember that it is difficult to estimate accurately the weight of your household goods.

The following information is a summary of some of the more important points that you should know when shipping your household effects.

- If you are ordered to a ship or mobile unit, you may ship your household goods to the home port or home yard of your vessel or unit, or to any selected point in the United States. If you do not wish your household goods shipped, storage privileges are the same as when ordered to duty outside the U.S.

If there is any doubt as to the best point to which your household goods should be shipped, see your shipping officer regarding entitlement to temporary storage or storage in transit at origin. This will give you time to make up your mind and still permit shipment to the proper authorized place.

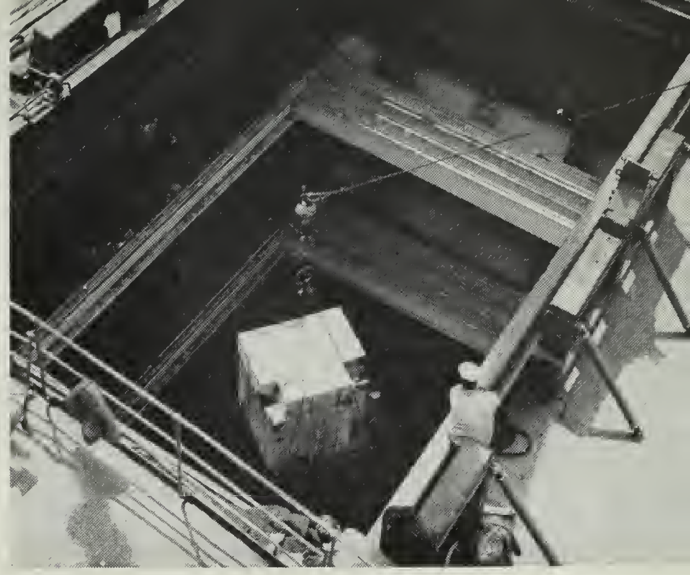
However, before making any arrangements or plans, it is suggested that you contact your nearest shipping officer. He will explain to you your shipping rights and any limitations which may apply in your case. (A list of activities designated to arrange for shipments of household goods can be found on page 32.)

- If you receive orders to attend a school, and wish to store or ship your household goods, your shipping officer will be able to determine from your orders whether your goods may be placed in storage at government expense, and between what points shipment may be made.
- As a rule, you must have received change of station orders before making arrangements for shipment. You must have certified copies of these change of station orders—usually six copies are required for each shipment. In addition, if you desire to have your dependent or agent make arrangements for shipment, you must furnish him with a power of attorney or some other written authority to arrange for the shipment in your name.
- If you have *temporary* change of station orders you may ship your temporary weight allowance of household effects between your duty stations. You may make shipment from and/or to places other than your duty stations. Shipment is made on a government bill of lading and you will be billed for excess costs, if any.

- If you have permanent change of station orders you may ship your permanent weight allowance of household goods between your permanent duty stations. Except in cases where your household goods are located at the home of record at the time of release from active duty, you may make shipments from and/or to places other than your duty stations. Shipments will be made on a government bill of lading and you will be billed by the government for excess cost, if any. You are authorized 90 days' storage in connection with a shipment of household goods. If necessary, because of conditions beyond your control and only when approved by your shipping officer, an additional 90 days storage may be authorized at government expense.

If you do not wish your household goods shipped to an overseas duty station, you may request to have them stored at government expense for the full time you are overseas. Your shipping officer will have specific information regarding storage and limitations.

In addition to having the certified copies of your orders, you must fill out an "Application for Transportation of Household Goods" (Standard Form 116) and an "Inventory of Household Goods" (Standard Form 117). This is an important step, because once the application is signed by you, it becomes the authority for making a shipment that may cost hundreds of dollars. Again, your shipping officer will be of invaluable assistance to you.



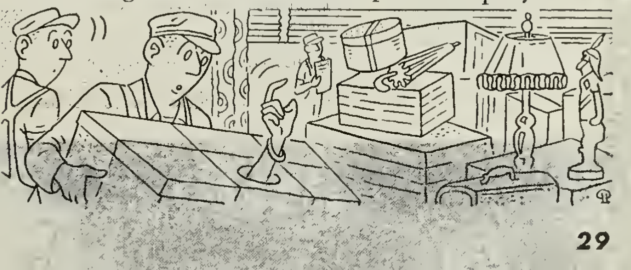
What You May Ship

A word on what you may, or may not, ship:

- You may ship usual household items, including furniture, clothing, baggage, and other items of a similar character, as well as professional books, papers, and equipment required in the performance of official duties.
- You may not ship boats, wines, liquors, pets, explosives, or things likely to damage equipment or other property. Other items which cannot be shipped are groceries and provisions other than those for consumption by you and your immediate family, articles acquired after the effective date of your change of station orders, articles for sale, or those intended directly or indirectly for persons other than you or your immediate family. For information on auto shipment and trailer transportation see page 33.
- Most household carriers will not accept articles of extraordinary value such as currency, valuable papers, jewelry, stamp collections and precious metals or articles manufactured therefrom. Most carriers' tariffs provide that if such articles come into the possession of the carrier without his knowledge, he will not assume liability for loss or damage.

If you have any doubt as to whether some of your goods will be accepted, ask your shipping officer. Articles of extraordinary value will be packed and crated in your presence and may be shipped via railway express. The weight of these items is part of the 500 pounds which you are ordinarily allowed to ship via express at government expense.

Generally, these items may not be shipped to a military installation but should be consigned to you or your agent at destination. If you do not have a residence established at your destination, you may have them consigned in care of the express company.



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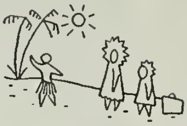
WHEN YOU RECEIVE PERMANENT ORDERS

Shipment can be made between duty stations. Except in cases where household goods are located at the home of record, upon release from active duty, shipment can be made from and to other places than your duty station (limited in cost).

Shipments will be made at government expense and you will be billed for excess costs, if any.

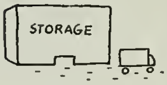
See text for permanent orders weight allowance.

Duty Outside the United States



Your weight allowance will be shipped to your overseas station (if not a restricted area) or to any point in the United States.

Contact the overseas area commander or your prospective commanding officer to find out what articles of furniture or household goods will not be needed at your new duty station overseas.



You may request storage for your household goods for the full time that you are overseas.

See your shipping officer for details and limitations.

Your household goods will not be shipped until you receive your dependents' entry approval, where applicable.

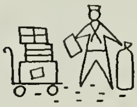
Sea Duty

If you are ordered to a ship or mobile unit, you may ship your household goods to the home port or home yard of the vessel or unit or to any selected point in the United States.

You may be directed to report to a vessel at a place which is not the home yard or home port. Be sure to find out home port of your vessel before shipping household goods.

If you do not want your goods shipped, storage privileges are the same as for overseas duty.

WHEN YOU RECEIVE TEMPORARY ORDERS



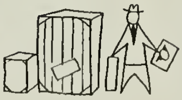
Shipments can be made between duty stations, or from and to other places than your duty station (limited in cost).

Shipments will be made at government expense and you will be billed for excess costs, if any. See text for temporary weight allowance.

When Ordered to School

If storage or shipment is desired, see your shipping officer. He will tell you whether or not your orders entitle you to shipment and/or storage of household goods.

SEPARATION FROM THE SERVICE



If your separation is under honorable conditions you may have your permanent weight allowance shipped from your last or any previous permanent duty station to your home of record or the place from which ordered to active duty, as you may elect for travel.

If your orders direct temporary disability retirement or retirement, see your shipping officer regarding privileges in shipping and storage.

Time limitation—Your household goods must be turned over to a shipping officer or carrier for shipment within one year from the date of release from active duty.

HOUSEHO

WHO CAN SHIP HOUSEHOLD GOODS

Personnel in pay grade E-4 (with over four (4) years' service), or E-4 on 31 Mar 1955 with four (4) years' service or less, and all personnel above that rate are entitled to shipment of household goods.

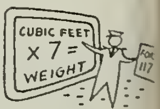
WHERE YOU CAN GET SHIPPING INFORMATION

Before making any arrangements it is important to get in touch with your shipping officer. He is your best source of information and will give you the word on your shipping rights and limitations. A personal interview with him is recommended. See text for a list of designated household goods shipping activities near you.

HOW MUCH CAN YOU SHIP

Your rank or rate at the time of detachment and the type of orders (temporary or permanent change of station orders) will determine your maximum weight allowance. See text.

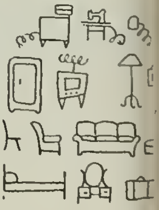
You can estimate the weight of your household goods fairly close by multiplying the approximate total cubic feet of your goods by seven. Cubic footage for average household goods can be found on the inventory form—Standard Form 117—available from your shipping officer.



WHAT YOU CAN SHIP AS HOUSEHOLD GOODS

Usual household items including furniture, household appliances, clothing, baggage and other similar items can be shipped. See your household goods shipping officer for exceptions.

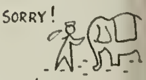
Professional books, papers, and equipment required in the performance of official duties are also permitted.



WHAT YOU CANNOT SHIP AS HOUSEHOLD GOODS

Automobiles or other motor vehicles. They are subject to special regulations. See below.

Automobile trailers may not be shipped even though they may contain household goods.



Boats, pets, wines, liquors, explosives or other items that are liable to damage other property may not be shipped.

Groceries and provisions other than those intended for your immediate family are not allowed.

Articles for sale or articles for persons other than you or your immediate family cannot be sent.

DON'T!
SALE
GOODIES MADE IN U.S.A.

CABIN BAGGAGE

Not more than two (2) standard handbags per person twelve years of age or over will be permitted aboard.

Children under twelve years of age are allowed one (1) standard handbag.

In addition, each person may carry a small case for toilet articles.

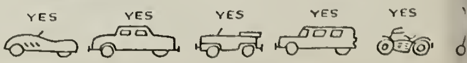
Footlockers and trunks are prohibited in cabins.

See NavSandA Publication 260 for details.

MOT

Motor vehicles may be shipped via government-ow
vessels or United States flag commercial vessels to over
duty stations for petty officers, 3d class, with more than
(4) years of service and personnel above that rate. Enli
personnel of grades E-4 with four (4) years or less serv
E-3, E-2, and E-1 must obtain authority from the over
commander concerned.

Trailers, trucks (including pickup types), buses, airpla
and boats are not authorized to be shipped.



Prepared by All Hands Magazine

N SHIPPING

as of May 1957)

OODS

WHAT PAPERS ARE NEEDED

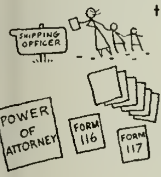
If you make arrangements personally you will need to:

Furnish the shipping officer six (6) "certified" copies of your orders. Each copy must be properly stamped and signed by an officer or notary public.

Fill out Application for Transportation of Household Goods (Standard Form 116).

Fill out Inventory of Household Goods (Standard Form 117).

If your dependent or agent makes arrangements for you, that person must:

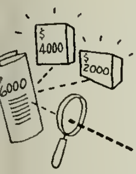


Apply to shipping officer at the nearest naval activity.

Furnish six (6) "certified" copies of your orders.

Fill out the above forms (Standard Forms 116 and 117).

Get from you some written authority (letter) or "power of attorney" to act in your name to arrange for shipment or storage.



INSURANCE

This is a matter for you to decide. Commercial insurance is recommended but the government will not assume the cost of it. If you do—it is *very important* that you declare the full value of your property and insure it fully to that amount.

Be sure to read your commercial insurance policy carefully! Make sure that you understand its provisions and limitations. See NavSandA Publication 260, available from your shipping officer.

LOSS OR DAMAGE CLAIMS

The carrier's liability is very small as compared to the value of your household goods. If the payment you receive from the carrier does not cover the loss, you may file a claim against the government. Should you intend filing a claim, contact the nearest shipping officer.

If your household goods are damaged when you receive them, contact the nearest naval activity for instructions. It is all right to sign the commercial bill of lading or freight bill but be sure to note the damage on carrier's copy and your own.

PARTIAL SHIPMENT BY EXPRESS

Under certain conditions you are entitled to ship 500 pounds gross weight (packed and crated) by express to your new duty station.

Your shipping officer will explain the privileges in your case. Refer to *Joint Travel Regulations*, (8052–1a).

HOW YOU CAN HELP IN PACKING AND MOVING

Be sure you, your dependent, or agent is at home when packer is to arrive.

Take down drapes and pictures from wall.

Arrange for the disconnection of automatic washers, kitchen ranges, refrigerators, freeze units, dryers, and other mechanical articles. Arrange to have them serviced for shipping and storage.

Refrigerators should be defrosted, clean, and thoroughly dried the day before to avoid mildew.

Have telephone and utilities disconnected.

TV antenna should be removed from roof and dismantled. These costs will have to be paid by you.

Purchase a supply of "hard-to-get" spare parts to pack with the article, especially if you are going overseas. (A couple of good mail order catalogues will come in very handy.)

Clothing, furs, rugs, and woolens should be sent to the cleaners to be properly serviced for shipping and storage.

Dishes and cooking utensils should be cleaned.

Dispose of opened but unused foods. Do not pack.

Don't include fresh fruits, plants, or flowers.

Contents of deep freeze units cannot be shipped.

Keep canned goods, sealed groceries, and other food supplies together in one area for shipping.

Remove articles from furniture drawers—especially heavy or breakable items, mirrors, framed pictures, and liquids.

Do not overload furniture with packed linens and sheets.

Dispose of old books, papers, magazines, excess furniture, and all articles which are worn out or no longer needed. Clean out the garbage containers and wastebaskets you want shipped.

Valuables or items of extraordinary value should not be packed by the owner. They should be shipped by express.

Don't forget to transfer your bank account (if desired), make arrangements to handle contents of your safety deposit box, discontinue milk and newspaper delivery service, and notify post office of your change of address. Notify commercial insurance agents of your transfer.

YOUR VALUABLES

Except when shipments are destined to overseas bases, articles of extraordinary value such as currency, valuable papers, jewelry, stamp collections, silverware, objects made of precious metals will *not* be accepted by household goods shipping activities.

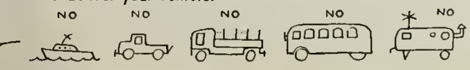
They can be shipped railway express and will be packed and crated in your presence.

See your shipping officer for advice in handling items of extraordinary value. Refer to *Joint Travel Regulations*, (8052–1b).

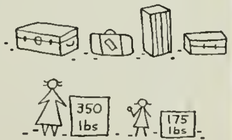
ICLES

mobiles, jeeps, motorcycles, motor scooters and motor and other passenger-carrying vehicles may be shipped. one such vehicle may be shipped in connection with (Permanent Change of Station) Orders.

your shipping officer and NavSandA Publication 260 for ls on how to condition and service your vehicle, what rs are needed, and to what activity (trans-shipping) application should be submitted. The trans-shipping ity (Navy port of embarkation) will notify you when where to deliver your vehicle.



HOLD BAGGAGE



Footlockers, trunks, suitcases, and similar wooden boxes (not furniture or major appliances) are classified as hold baggage.

Weight limitations are 350 pounds per person twelve years of age or over and 175 pounds for each child under twelve years old.

Hold baggage which cannot be carried on your commercial railroad ticket should be shipped to arrive at trans-shipping point (Navy port of embarkation) at least five (5) days before sailing date.

See NavSandA Publication 260 for details.

moving household effects

Professional Books

You may ship professional books and papers in addition to your authorized weight allowance if they are used in the performance of official duties. The estimated weight of the professional books must be shown in your application (Standard Form 116) and these items must be separated from your household goods at the time they are turned over to the packer and marked as professional books, papers and equipment. Otherwise, the weight of these items will be charged against your authorized allowance.

How You Can Ship

Generally, you are entitled to services of packing, crating, shipment, storage, hauling, unpacking and uncrating of household goods when necessary in connection with your change of station orders.

The shipping officer will designate the method—freight, express, van or water—by which your household goods will be routed. In making this designation, he must adhere to established transportation policies and practices and the interest of the government. He will, however, also consider your individual needs.

Under certain conditions you are entitled to ship 500 pounds gross weight (packed and crated weight) by express to your new duty station. Your shipping officer will explain the special privileges that apply in your case. (It must be pointed out that if you do take advantage of the express shipment, its weight will be charged against your over-all weight allowance.) A separate application for shipment of household goods

List of Shipping Activities in U.S.

HERE'S a list of activities within continental United States designated to arrange for shipment of your household goods:

FIRST NAVAL DISTRICT

Portsmouth Naval Shipyard,
Portsmouth, N. H.
(Including household goods of Marine Corps personnel attached to the Marine Barracks, Naval Base.)
Boston Naval Shipyard, Boston, Mass.
Naval Supply Depot, Newport, R. I.
Naval Air Station, Quonset Point, R. I.
Naval Air Station, Brunswick, Maine

THIRD NAVAL DISTRICT

Naval Supply Facility, Brooklyn, N. Y.
Naval Supply Depot, Scotia, N. Y.
Naval Supply Depot, Bayonne, N. J.
Naval Air Station, Niagara Falls, N. Y.
Naval Submarine Base,
New London, Conn.
Naval Ammunition Depot, Earle, N. J.

FOURTH NAVAL DISTRICT

Philadelphia Naval Shipyard,
Philadelphia, Pa.
Naval Supply Depot, Mechanicsburg, Pa.
Naval Air Development Center,
Johnsville, Pa.
Naval Air Station, Lakehurst, N. J.
Naval Air Station, Columbus, Ohio
Naval Air Station, Akron, Ohio
Navy Finance Center, Cleveland, Ohio

FIFTH NAVAL DISTRICT

Naval Training Center, Bainbridge, Md.
Naval Supply Center, Norfolk, Va.
Naval Air Station, Chincoteague, Va.
Naval Ordnance Plant,
South Charleston, W. Va.
Naval Mine Depot, Yorktown, Va.
Norfolk Naval Shipyard, Portsmouth, Va.
Naval Ordnance Plant, Louisville, Ky.
Marine Corps Air Station,
Cherry Point, N. J.
(The Marine Corps supply officer will handle shipments of household goods of both Navy and Marine Corps personnel.)

SIXTH NAVAL DISTRICT

Naval Air Station, Memphis, Tenn.
Naval Air Reserve Facility,
Birmingham, Ala.
Naval Air Station, Jacksonville, Fla.
Marine Corps Air Station, Miami, Fla.
(The Marine Corps supply officer will handle shipments of household goods of both Navy and Marine Corps personnel.)
Naval Air Station, Pensacola, Fla.
Naval Station, Key West, Fla.
Navy Mine Defense Leboratory,
Panama City, Fla.
Naval Air Station, Sanford, Fla.
Charleston Naval Shipyard,
Naval Base, S. C.
Naval Air Station, Atlanta, Ga.
Naval Air Station, Glynco, Brunswick, Ga.
Naval Station, Green Cove Springs, Fla.

EIGHTH NAVAL DISTRICT

Naval Station, New Orleans, La.
Naval Air Station, Corpus Christi, Tex.
Naval Air Station, Dallas, Tex.
Naval Station, Orange, Tex.
Naval Ammunition Depot,
McAlester, Okla.
Naval Air Technical Training Center,
Norman, Okla.

NINTH NAVAL DISTRICT

Naval Air Station, Minneapolis, Minn.
Naval Air Station, Grosse Ile, Mich.
Naval Supply Depot, Great Lakes, Ill.
Naval Air Station, Lambert Field,
St. Louis, Mo.
Naval Air Station, Hutchinson, Kans.
Naval Air Station, Olathe, Kans.
Naval Air Station, Lincoln, Nebr.
Naval Ammunition Depot, Hastings, Nebr.
Naval Ammunition Depot, Crane, Ind.
Naval Avionics Facility, Indianapolis, Ind.
Naval Air Station, Denver, Colo.

ELEVENTH NAVAL DISTRICT

Naval Supply Depot, San Diego, Calif.
Naval Construction Battalion Center,
Port Hueneme, Calif.
Naval Ordnance Test Station,
China Lake, Calif.
Naval Air Facility, Litchfield Park,
Phoenix, Ariz.
Naval Auxiliary Air Station,
El Centro, Calif.
Long Beach Naval Shipyard,
Long Beach, Calif.
Marine Corps Air Station, El Toro, Calif.
(The Marine Corps supply officer will handle shipments of household goods of both Navy and Marine Corps personnel.)

TWELFTH NAVAL DISTRICT

Naval Ammunition Depot,
Hawthorne, Nev.
Naval Supply Center, Oakland, Calif.
Mare Island Naval Shipyard,
Vallejo, Calif.
Naval Supply Depot, Clearfield, Utah
Stockton Annex, Naval Center Oakland,
Stockton, Calif.
Naval Postgraduate School,
Monterey, Calif.

THIRTEENTH NAVAL DISTRICT

Naval Supply Depot, Seattle, Wash.
Puget Sound Naval Shipyard,
Bremerton, Wash.
Naval Supply Depot, Spokane, Wash.
Naval Air Station, Whidbey Island, Wash.
Naval Station, Tacoma, Wash.
Naval Station, Tongue Point, Oreg.
Naval Ordnance Plant, Pocatello, Idaho

POTOMAC RIVER NAVAL COMMAND

Naval Proving Ground, Dahlgren, Va.
Naval Gun Factory, Washington, D. C.
Naval Powder Factory, Indian Head, Md.
Naval Air Station, Patuxent River, Md.

SEVERN RIVER NAVAL COMMAND

Naval Academy, Annapolis, Md.

NOTE—For those persons who are on recruiting duty, at recruiting stations located at points further than 100 miles from a designated naval activity, the recruiting station will have the same status as a designated shipping activity.

If assigned outside Continental U. S., shipment will be arranged by cognizant naval attaché or nearest Navy supply activity.

(Standard Form 116) and additional certified copies of your orders are required for an express shipment. In the event you desire to ship your professional books, papers and equipment by express, they will be charged against your 500-pound express allowance.

Packing and Crating

When moving by van your furniture will not be packed and crated (except for dishes, bric-a-brac, kitchenware and linen). Either your goods will be loaded directly from your residence on an "over-the-road-van" or they may be transported to the carrier's warehouse for consolidation with other lots of household goods and shipped from that point.

The carrier will request that you sign an "Accessorial Services Certificate" which lists the units of packing performed by the packers and other additional services. Before signing the certificate, be sure that units of packing indicated on it are correct.

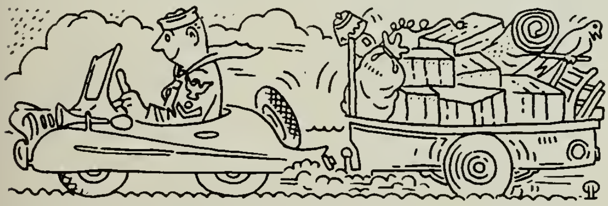
When moving by water, rail or motor freight, your dishes, linens, kitchenware, and bric-a-brac will be packed at your residence. These items, along with your furniture will be taken to the commercial contractor's packing plant or to a governmental activity where they will be completely packed and crated for shipment.

Regardless of the method of shipment, you should insist that an inventory be prepared and that you be given a copy. This inventory will list the pieces and indicate the condition of furniture and equipment removed from your residence. It will list the boxes and barrels packed at the residence, but not the individual items in them.

Some packers use general terms or symbols such as "M" and "S" (marred and scarred) freely, a practice which may later complicate your substantiating a claim for damages resulting from the shipment. It is advisable to make arrangements with the individual preparing the inventory to notify you when he intends to use general terms. If you feel that the inventory does not describe the condition of your goods fairly, request that it be amended or that the location and extent of the exceptions be indicated.

Be sure that you or your agent and the person preparing the inventory sign the inventory. Signing the inventory indicates agreement as to count and condition of your property.

If your household goods were shipped by moving van it is important to permit the delivering carrier to unpack any items which were packed by them in order that the responsibility in the event of damage may be properly placed with the carrier.



No matter how your household goods are shipped, the packers should remove from the premises all packing and waste materials resulting from the move and leave your residence in an orderly condition.

Filing Claims On Damaged Goods

If your household goods are damaged when you receive them, you should immediately contact the nearest shipping officer and request information on procedure to be followed. If a commercial carrier delivered your goods, you must request the carrier's representative to inspect your damaged property.

Do not refuse to sign the commercial bill of lading and/or freight bill or government bill of lading because your property has been damaged. Make a notation on the reverse side of the government bill of lading and in the space "Receipt of Delivery" on the commercial bill of lading and/or freight bill, as well as the "delivery receipt" on the carrier's inventory. Do not discard or have the damaged property repaired before it is inspected.

The carrier's liability is very insignificant in relation to the value of your household goods. On freight shipments, the carrier need only reimburse you to the extent of 10 cents per pound for each damaged article. If your goods are shipped by long distance van, the carrier's liability generally will not exceed 30 cents per pound per article. If shipment is made via railway express, the liability is $50 on any weight up to 100 pounds and 50 cents per pound on a shipment weighing over 100 pounds.

However, if the payment you receive from the carrier does not cover the loss, you may file a claim against the government. Your shipping officer will advise you.

It is important that you contact your nearest shipping officer promptly if you intend to file a claim, since there is a nine-month time limitation for filing.

Whether or not you decide to insure your household goods is up to you. The government will not assume the cost of any commercial insurance. You may, however, present a claim to the government for loss or damage resulting from the shipment and this privilege in itself is similar to an "all risk" transportation policy. Reimbursement by the government is limited to $6500 and claims must be filed within two years.

Trailers

Trailers may not be shipped overseas. However, you may be reimbursed for transportation of your house trailer (for use as a residence) upon permanent change of station within the continental U.S. You may receive 10 cents per mile if you haul your own house trailer or 20 cents per mile if the trailer is towed by a commercial firm. This is in lieu of transportation of baggage and household effects. Details are described in Vol. IV of the *NavCompt Manual.*

Shipping Autos Overseas

As a rule, only personnel in pay grades E-4 (with more than four years' service) and above are authorized to ship motor vehicles overseas. Enlisted personnel of grades E-4 with four years or less service, E-3, E-2 and E1 must obtain authority from the overseas commander concerned before they may ship motor vehicles overseas. The term "motor vehicle" includes jeeps, automobiles, motorcycles (with or without side cars), motor scooters and motor bikes. The shipment of trailers, trucks (including pickup types), buses, airplanes or boats (including motor boats) is not authorized. You may ship only one vehicle.

The first step in this process is to obtain a "Motor Vehicle Shipment Application" (DD Form 882) from your shipping officer and submit it, along with two certified copies of your change of station orders, at once to the port from which your car will be shipped. It is suggested that you act promptly because shipments are made on a priority basis. You may get the necessary copies of DD Form 828 from your nearest shipping activity. Your shipping officer will tell you of the address to which the form should be forwarded.

Although there is nothing more for you to do officially until you receive notice from the port authority of the date you should deliver the vehicle, there are a few things you should do while you are waiting.

You must have your registration card and in the event a lien is held against the automobile, you must have a letter from the holder of the lien, granting you permission to take the car out of the U.S. If you do not deliver the car in person, your agent should have a power of attorney or written authority to represent you.

When you deliver the car to the shipping officer there must be a full set of keys, and the gasoline tank cap must be of the type that locks. In addition, all mirrors, hubcaps, tools and other loose items should be removed from the car and placed in a box. Although the box may be left in the trunk compartment of the automobile if you wish, it should be marked with your name, grade, service number and destination. When the shipping officer receives your car there is nothing more for you to do until you pick it up at the port serving your next duty station where local regulations govern.

Here's Check-Off List

Now that you've read the summary on shipping HHE, check the following:

What you should do

☞ Have sufficient certified copies of your change of station orders (usually six copies for each shipment of household goods). Then, contact your shipping officer at least five days before you move.

☞ If you have professional books and papers to be shipped, advise the shipping officer in order that they may be packed and weighed separately.

☞ If you plan to proceed to your new duty station before your household goods are shipped, leave or send your wife sufficient number of certified copies of your change of station orders. Also leave or send power of attorney or written authority for her to make shipment.

☞ If you have gold, silver, or other valuables to be shipped, inform your shipping officer in order that special arrangements may be made.

☞ Get all information possible about housing conditions at your new duty station before requesting shipment of your goods. (See page 13.)

☞ Request storage at point of origin whenever you are in doubt as to where to ship your goods.

☞ If goods are going by van, be sure to obtain a copy of the inventory sheet from the driver.

☞ The van driver will request you to sign a "certificate of packing." The certificate contains an itemized list of the units of packing performed at your residence. Be sure to check the certificate carefully and never sign it in blank.

☞ If your orders are changed or canceled, or a change of destination of the shipment is desired, contact the shipping officer immediately.

☞ Be sure to have your automatic washing machine, deep freezer, refrigerator and television set serviced for shipping. The government does not perform this service. See your electrical dealer on this.

☞ Obtain from your shipping officer the approximate time of arrival of your goods at destination.

☞ You or your wife should be at home on the day of the expected move.

☞ Make arrangements for receipt of the property at destination. If you cannot be at the destination at the time of arrival of your goods see your shipping officer to determine whether storage is authorized. In cases of direct delivery by van, you or your agent must be at home to receive it.

☞ If possible, turn over all your household goods for the same destination at one time, except silver, gold, items of extraordinary value, or items to be shipped by express.

☞ Call to the attention of the movers fragile items such as chinaware and delicate glassware.

☞ Keep groceries and food supplies together in one place for proper packing.

☞ Remove articles from drawers of furniture intended for packing and crating. The extra weight in furniture drawers tends to damage them. However, if furniture is to be moved by van, light-weight linens and clothing may be left in the drawers.

☞ Be sure to make arrangements to have your telephone service and other utilities discontinued.

☞ For your own convenience in unpacking or storage, paste a label on each box or trunk showing its general contents.

What you should not do

☞ Do not request shipment to a place other than your new duty station without finding out first how much it will cost you.

☞ Do not contract for shipment with commercial concerns unless you have been authorized to do so in writing by your shipping officer.

☞ Do not become alarmed if the movers are not at your residence at exactly the appointed time. It is difficult to schedule a move at a precise hour.

☞ Do not request special services from the carrier until after you have checked with your shipping officer.

☞ Do not pack your dishes or bric-a-brac yourself. Leave this to professional packers. They are qualified to do the job. Usually commercial firms won't pay claims on items which they do not pack.

advancement: up the navy ladder

YOU MAY HAVE JOINED the Navy to see the world, but now that you're in, you're probably just as interested in seeing more stripes on your rating badge and bigger figures on your paycheck. That isn't too hard to do if you've got the ability and the qualifications—for the Navy's advancement system is designed to give equal opportunity to all potential petty officers, and allow them to advance as rapidly as the needs of the service will permit.

Enlisted Advancement

To qualify for petty officer you must:

- Satisfactorily complete Navy Training Courses or correspondence courses when they are required for your next higher rate. (NavPers 10052 lists these courses.)

- Satisfactorily complete a course of instruction at a service school when such is required.
- Qualify in the practical factors for your rate, as defined in the *Manual of Qualifications for Advancement in Rating* (NavPers 18068 Revised) and as listed in the Navy Training Courses (or Study Guides) for your rate.
- Have satisfactorily completed the performance test for your next higher grade if such a test is required. (See NavPers 18068.)
- Be recommended by your commanding officer.
- Have passed a service-wide examination for the rate involved. (This examination, like the Navy Training Courses for your rate, is developed from the qualifications for advancement in rating contained in NavPers 18068. These qualifications are also listed in the Navy Training Courses and, if applicable, the Study Guides for your rate.)

This is not to suggest, of course, that you will be advanced the minute you have completed the above requirements. These are simply the *minimum* requirements.

How long will it be before you can anticipate promotion? Well, it just depends. Your wait will vary with your individual capacity, the pay grade for which you are eligible and your rating. Naturally, a man in a rating which has a continuing need for additional petty officers can expect to advance more rapidly than one in a rating where there is less need for petty officers. This is especially true in the higher pay grades where the numbers on board may already be greater than the requirements for that pay grade. But bear in mind that the opportunity for advancement is always present for the best qualified people.

Theoretically, a man who isn't afraid of hard work might possibly make chief in about seven years under normal conditions, providing he gets the breaks in his favor. To be on the safe side, however, if you estimate your goal as chief at nine to twelve years, you won't be too far wrong. Of course, in time of war or national emergency, advancements are frequently speeded up.

In the first three pay grades advancement follows a fairly regular schedule. Advancement from pay grades E-1 to E-2 is normally effected upon completion of recruit training. For advancement to E-3 there are five considerations:

(1) Service in pay grade; (2) practical factors; (3) military requirements; (4) a local examination and (5) recommendation of your commanding officer.

For advancement in the petty officer ratings, you must, in addition to the five factors mentioned for advancement to E-3, also complete training or school courses (see page 44) and pass a service-wide examination. In addition, there must be a place for you in the Navy scheme of things. There doesn't necessarily have to be a billet available in your ship or station, but there must be a need and place for additional petty officers in the Navy as a whole.

When you meet the eligibility requirements stated above, you can, and should, take the service-wide examination. Your possible advancement will depend upon your final multiple standing and the needs of the service for additional petty officers in the rate for which you compete.

When the number of individuals who pass a particular examination exceeds the number that can be advanced, an advancement "quota" is imposed by the Chief of Naval Personnel. The "quota" includes numbers to make up for the attrition which is expected to take place before the next exam because of loss of personnel through discharge, advancements to higher pay grades, etc.

Service-wide Exams

The purpose of the service-wide exam set-up is to provide a controlled system through which each enlisted Navyman will have recurrent opportunities to compete for advancement in his chosen field. The number of opportunities available depends upon the needs of the service, but your qualifications determine whether you get that extra stripe. For information on expected opportunities in the next service-wide examination, you may check BuPers Notices of the 1430 series, which are issued about three months before each February and August examination.

Examinations for advancement to pay grade E-4, E-5 and E-6 of all ratings are given twice a year—in February and August. Additional exams are conducted in May and November for "selected" E-4 rates in which there is a continuing need for new petty officers. Examinations for E-7 are held in February of each year.

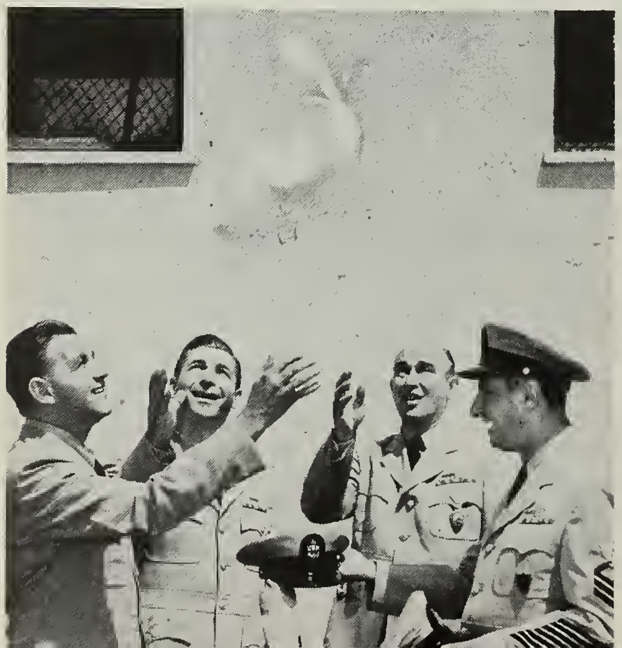
Thus, you can see that opportunity knocks more than once when you're in the Navy.

Officer Promotion

THE PRIME PURPOSE of the Navy's promotion system is to produce the best possible officers, and to make sure they have the qualifications and experience to handle the responsibilities of rank. Here, in brief, is how the promotion system works.

To be promoted above lieutenant (junior grade) under the Officer Personnel Act of 1947, an officer on active duty must be: (1) Selected by a selection board; (2) found physically qualified by a board of medical examiners; and, (3) found mentally and professionally qualified by a naval examining board. Also, before he may be promoted, the President must nominate him for appointment to a higher grade and the Senate must confirm that nomination. Promotions are effected as vacancies occur in the grade for which the officer is selected.

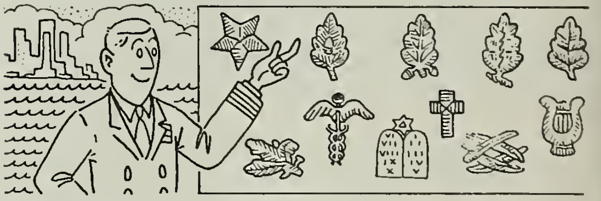
In addition to these requirements, permanently commissioned male line officers of the Regular Navy not restricted in the performance of duty, and limited duty line officers in the grade of lieutenant and higher, must have two years' sea or foreign service in grade, as defined by BuPers Inst. 1412.7, to be promoted.



Before an officer is eligible for consideration by a board, he must have a specified amount of time in his present grade. Time-in-grade requirements are: for a LTJG to be considered for promotion to LT, two years; LT to LCDR, four years; LCDR to CDR, four years; CDR to CAPT, five years; and CAPT to Flag rank, three years.

Promotion Zones

Promotion zones are established by the Secretary of Navy in the manner set forth by law in the Officer Personnel Act and defined additionally in *BuPers Manual* Chapter VII. Briefly, a promotion zone consists of a number of the most senior officers in that grade and specialty (that is, line or staff corps) under consideration, who are eligible for (and have not previously failed of) selection for promotion to the next higher grade. Also, they must either be selected by the board in question or be considered as having failed of such selection, in order to assure equality of opportunity for promotion to individuals in succeeding years. The normal periods of total commissioned service specified in the Officer Personnel Act for officers in the promotion zone are: for promotion to lieutenant, officers with six years' service; to lieutenant commander, those with 12 years' service; to commander, those with 18 years' service; and to captain, those with 25 years of service. It is worthy of note that officers are currently being promoted ahead of these normal periods of total commissioned service.



Professional Examination

In addition to meeting the above qualifications, officers on active duty in the ranks of LTJG through CDR are required to take written professional examinations for promotion. The scope of the examinations and pertinent information for the various categories of officers are contained in BuPers Instructions of the 1416 series, which should be studied carefully by all candidates. The same instructions also list residence and correspondence courses, which will earn exemptions from specific written examinations.

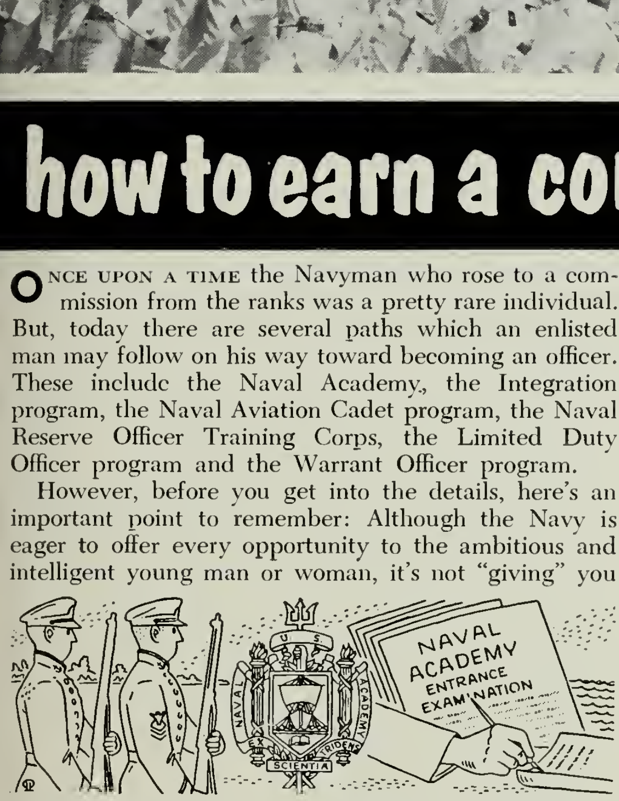
Officers selected for promotion to the grade of rear admiral and officers becoming eligible for promotion to the grade of LTJG are normally examined on the record only. Accordingly, no written professional exams have been provided for them. Ensigns however, are encouraged to take correspondence courses which will prepare them for promotion to higher grades, since these courses will earn them exemptions from examinations for future promotions.

At present, warrant officers are not required to take written examinations for promotion, but they will be, commencing in July 1958. An examination and study plan, now in preparation, will be issued in October 1957.

how to earn a commission

Once upon a time the Navyman who rose to a commission from the ranks was a pretty rare individual. But, today there are several paths which an enlisted man may follow on his way toward becoming an officer. These include the Naval Academy, the Integration program, the Naval Aviation Cadet program, the Naval Reserve Officer Training Corps, the Limited Duty Officer program and the Warrant Officer program.

However, before you get into the details, here's an important point to remember: Although the Navy is eager to offer every opportunity to the ambitious and intelligent young man or woman, it's not "giving" you anything. You aren't going to get any of the prizes described here unless you make a determined effort to earn them.



Naval Academy

The quotas for appointment to the U. S. Naval Academy provide for the annual admission of 160 enlisted men from the Regular Navy and Marine Corps and 160 enlisted men from the Navy and Marine Corps Reserves. Eligible Regulars, and Reservists on two years' active duty, who are nominated by their commanding officers and who pass the preliminary physical and scholastic examinations, are sent to the Naval Preparatory School at Bainbridge, Md., for instruction designed to prepare them for the Naval Academy entrance exams and academy course of study. Reservists who are on inactive duty when nominated are not sent to the Preparatory School.

- ***Requirements***—To be eligible to compete for an Academy appointment of this type, a Regular must have enlisted on or before 1 July of the year preceding that in which the Naval Academy entrance examinations are held. (For example, a candidate for the USNA class beginning in 1957 must have enlisted on or before 1 July 1956.) A Reservist must have had at least one year in the inactive Reserve by 1 July of the year of admission to the Academy, and must have attended a minimum of 28 regular drills between 1 July and the beginning of the Naval Academy entrance examinations, the fifteen day of March. Active service may be accepted in lieu of drills, one full week of active service being equivalent to one drill.

In addition, an applicant must have passed his 17th birthday, but must not have reached his 22nd by 1 July of the year he will enter the Naval Academy. He must be unmarried and agree to remain unmarried until commissioned.

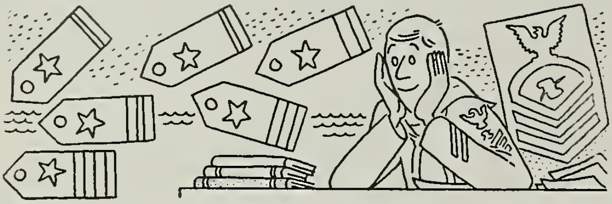
There are no minimum educational requirements for USNA candidates who wish to enter the enlisted competition for enrollment in the Preparatory School. However, at least three years of high school are recommended to compete successfully.

Any enlisted man wishing to become a candidate should tell his commanding officer. COs of ships and stations conduct a survey of enlisted personnel, usually some time between March and 1 July of each year, for the purpose of nominating those they consider suitable officer material.

- ***Preparatory School***—Applicants are required to take the preliminary examination about 1 July to determine their degree of aptitude in subjects involved in the Naval Academy entrance examination. Candidates who successfully meet these initial requirements are then transferred to the Naval Preparatory School, which remains in session from September until the USNA entrance exams in March the following year.

The 160 Regulars from the Naval Preparatory School who finish highest in the Academy entrance examina-

tions are appointed to the Academy. The two-year-active-duty Reservists from the school and the inactive-duty Reservists compete for the 160 Reserve appointments in a similar manner. Those standing below the first 160 in the competitive list for their component, but who pass the entrance exam, become eligible for admission in the event eligible candidiates fail the physical exam, or for other reasons, do not enter the Academy.



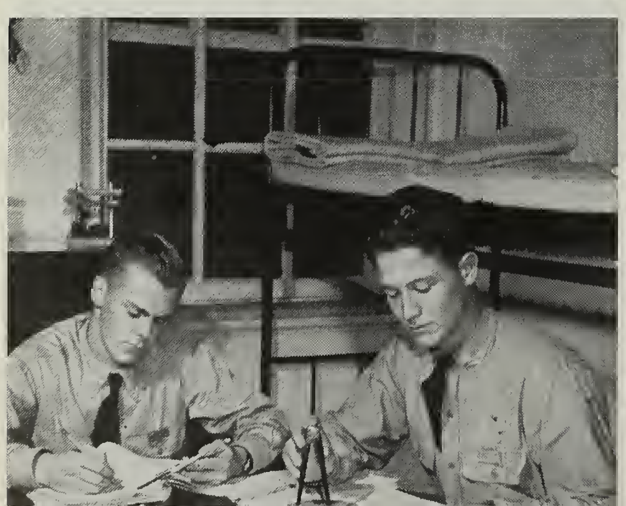
• ***Other Types of Appointment***—Besides entering Annapolis under the quotas for Regulars and Reserves, there are several other ways a man already in the Navy might enter the Academy. He might obtain a Congressional appointment. He might be appointed under quotas set aside for the sons of officers or enlisted men (active or retired) in the Regular Army, Navy, Marine Corps, Air Force and Coast Guard. Or, he might be appointed as the son of a recipient of the Medal of Honor or as the son of a deceased veteran. The latter category is for the sons of armed forces personnel who were killed in action or who have died of wounds or injuries received, or disease contracted or aggravated in active service during the two World Wars and the Korean fighting.

When a candidate is eligible to apply for more than one type of appointment, it may be to his advantage to do so.

Integration Program OCS

The new Regular Navy Integration Program is another plan whereby enlisted personnel may earn commissions in the Navy. This is a concentrated course of study at the Officer Candidate School, Newport, R. I., that keeps a man on his toes for 16 weeks.

A high school education or the equivalent, plus a GCT or ARI of 60, are the educational requirements for selection in the Integration program. This training leads to appointment as ensign, USN, in either the line or staff corps. To qualify for a Civil Engineer Corps appointment, the applicant must have at least three years of college credits toward an engineering degree from an accredited engineering school.



Following are the basic requirements for selection. For more complete details, see BuPers Inst. 1120.18C and latest revisions.

• ***Eligible applicants***—This program is open to chief warrant officers, warrant officers, enlisted men and women of the Regular Navy who are citizens of the U. S. and serving in the Navy at the time a selection board designates qualified appointees.

CWOs, WOs and CPOs must have three years of Regular Navy service in one of these grades or combinations of them, immediately preceding and computed to 1 April of the calendar year in which the appointment can first be made.

Chiefs and below must have four years of continuous Regular Navy service, immediately preceding and computed to 1 April of the calendar year in which the appointment can first be made. However, a CPO has the option of meeting either this requirement or the one for CWOs, WOs and CPOs.

In any event, you must have at least one year of obligated enlisted service upon entering the program.

For the two-year period preceding the date of application, you must have no record of conviction by a general, special or summary court-martial, or by a civil court for any offense other than minor traffic violations.

• ***Age***—Men must be at least 19 and under 32½ years of age and women must be at least 21 and under 29½ years of age, both computed to 1 July of the year in which they could be appointed.

• ***Education***—As already stated, you must be a high school graduate or have the service-accepted equivalent, as set forth in BuPers Inst. 1560.1, and have a GCT or ARI of at least 60. However, if you have completed four semesters of work toward a college or university degree, or have satisfactorily completed the USAFI Educational Qualification test 2CX before 1 Jan 1954, or the USAFI College Level GED test after that date, you are also eligible. The CEC requirement (mentioned above) is three years of college credits toward an engineering degree from an accredited engineering school.

• ***Physical Requirements***—You must be physically qualified for original appointment in the line or staff corps, as appropriate, in accordance with the provisions of the *BuMed Manual.*

• ***Dependents***—Men may have any number of dependents. Women must meet the dependency requirements set forth in Paragraph 2, Article C-1102, *Bureau of Naval Personnel Manual.*

All requests to be considered for the Integration Program, for either the line or staff corps, must be submitted to your commanding officer between 1-20 March of the year of application.

Naval Aviation Cadets

A third path, the Naval Aviation Cadet program, leads to a commission and "Navy wings." It provides flight training for qualified EMs of the Regulars and Reserves who are serving on active duty.

• ***Requirements***—The latest qualification standards and procedures for active duty personnel are listed in BuPers Inst. 1120.20A. To be considered under the present instructions you must:

- Be a U. S. citizen over 18 but under 25 years of age on the date application is submitted.
- Agree to remain on active duty for four years from date of first reporting to Pensacola for active duty in the grade of Naval Aviation Cadet, unless sooner released.
- Attain a minimum grade of 3 on both the Aviation Qualification Test and Flight Aptitude Rating Test.
- Be selected and recommended by your commanding officer (who utilizes the service of a locally convened selection board).

There are four methods of meeting the educational requirements for this program:

- Satisfactory completion of two full years (60 semester or 90 quarter hours) of unduplicated passing work at an accredited college or university;
- Satisfactory completion of the USAFI 2CX test;
- Satisfactory completion of one year (30 semester or 45 quarter hours) of passing work at an accredited college or university, plus a combined GCT-ARI score of 120 and a MECH score of 58; or
- Satisfactory completion of the USAFI GED test, College Level, plus a combined GCT-ARI score of 120 and a MECH score of 58.

Men who have previously been dropped from any military flight training program by reason of flight failure, or who have previously qualified as naval or military aviators are not eligible for this program.

Applications are submitted on NavPers Form 953, endorsed by your commanding officer and accompanied by Statement of Personal History (DD 398), loyalty certificate, educational transcripts, USAFI test reports, NavCad contract, and consent forms and classification test scores as applicable.

Upon final review of your application by the Bureau you will be notified, via your CO, of the action taken. If eligible you will have your name placed on a priority list according to your date of acceptance.

- ***Selection***—Quota allowances will govern selection of candidates from this list. No specific information can be given as to when you will be ordered to flight training. If accepted, you will be ordered to NAS Pensacola, Fla., for training in the grade of Naval Aviation Cadet, USNR. After completion of approximately 14 months of the 18-month flight training course, you will be designated a Naval Aviator and appointed as ensign, 1325, USNR. You will then continue flight training as an officer. Within authorized quotas NavCads are permitted to volunteer for selection and appointment as second lieutenant, USMCR.

You will be released to inactive duty upon fulfillment of your contract after a total of four years of NavCad plus commissioned service, unless extension of active duty or transfer to the Regular establishment has been requested by you and approved by the Chief of Naval Personnel. You are permitted to continue on active duty at your request depending upon vacancies in the service and the needs of the service. After 18 months' commissioned service in the Naval Reserve, you may request appointment to the Regular Navy, once again, subject to the needs of the service.

Aviation Officer Candidate Program

Another program leading to a commission and Navy wings is Aviation Officer Candidate training, which is open to eligible college graduates serving on active duty as enlisted men in the Regular Navy or Reserves. (It is also open to qualified civilian college graduates.)

Under this program selected applicants are ordered to the AOC School, NAS, Pensacola, Fla., and upon successful completion of the first four months of officer indoctrination and preflight training, are appointed ensigns in the Naval Reserve. After that they undergo approximately 14 months of flight training, during which they are designated as Naval Aviators (1315). They are required to remain on active duty for at least two years from the date flight training is completed. Later on, they may apply for Regular commissions.

To qualify, an enlisted Regular or Reserve on active duty must:

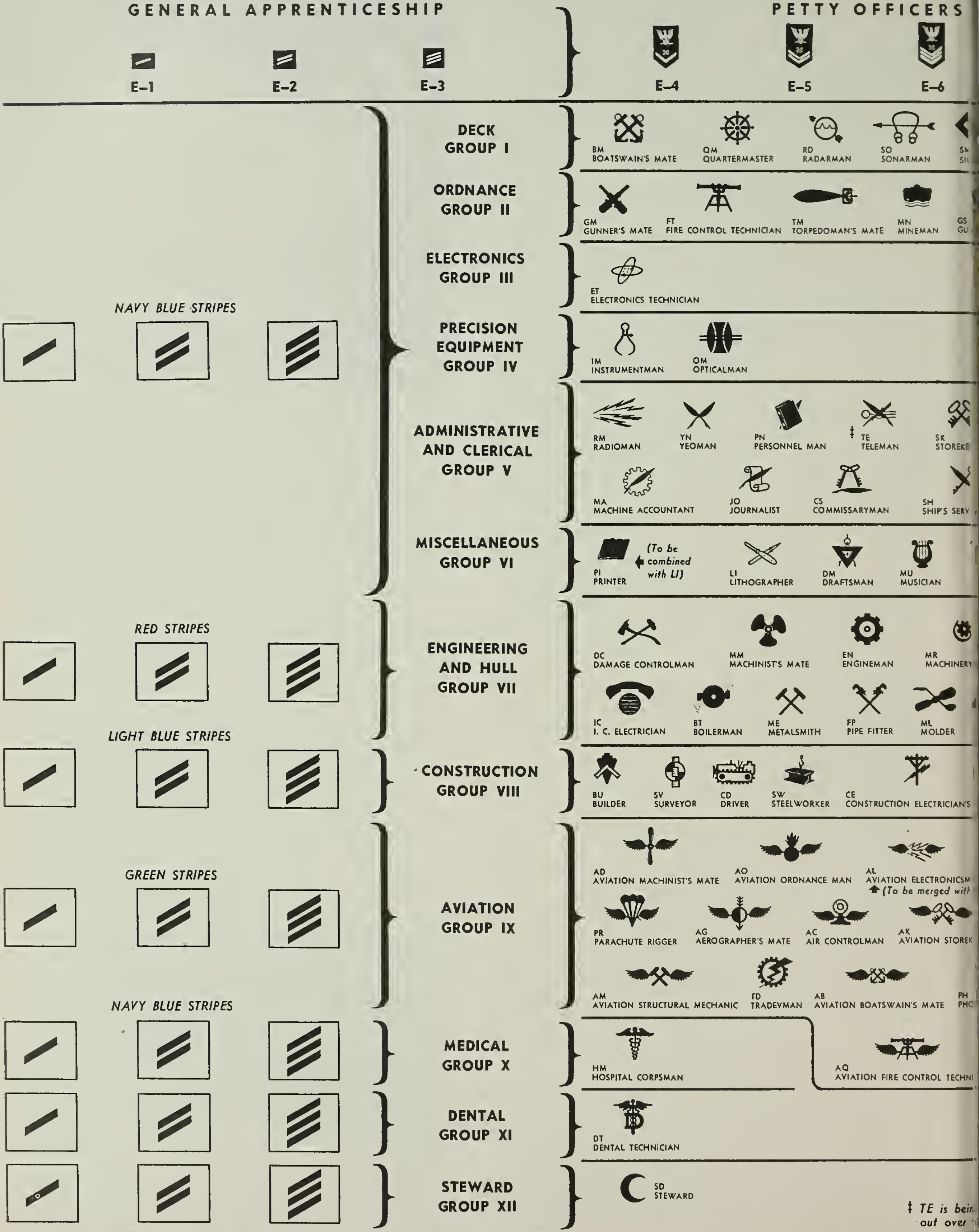
- Be a male citizen.
- Have a baccalaureate degree from a college or university and have completed a minimum of 120 semester hours or its equivalent. (Determination of accreditation of colleges and universities will be made by the Chief of Naval Personnel.)
- Be at least 19, but less than 26 years old at time of application.
- Meet the other eligibility requirements contained in BuPers Inst. 1120.25.

NROTC—Naval Reserve Officer Training Corps

This program is open to both active and inactive duty personnel. It was established in 1926 to offer certain college students the Naval Science courses required to qualify them for commissions in the Naval Reserve upon graduation. The mission of NROTC was greatly expanded in 1946 (under the Holloway Plan) to include the training of prospective career officers for the Regular Navy, as well as for the Naval Reserve.

- ***Requirements***—Applicants must be at least 17 but not over 21 years old as of 1 July of the year of enroll-

PATHS OF ADVANCEMENT



GENERAL APPRENTICESHIP

E–1 E–2 E–3

PETTY OFFICERS

E–4 E–5 E–6

NAVY BLUE STRIPES

DECK GROUP I

BM BOATSWAIN'S MATE
QM QUARTERMASTER
RD RADARMAN
SO SONARMAN
SI

ORDNANCE GROUP II

GM GUNNER'S MATE
FT FIRE CONTROL TECHNICIAN
TM TORPEDOMAN'S MATE
MN MINEMAN
GS GU

ELECTRONICS GROUP III

ET ELECTRONICS TECHNICIAN

PRECISION EQUIPMENT GROUP IV

IM INSTRUMENTMAN
OM OPTICALMAN

ADMINISTRATIVE AND CLERICAL GROUP V

RM RADIOMAN
YN YEOMAN
PN PERSONNEL MAN
‡ TE TELEMAN
SK STOREKE
MA MACHINE ACCOUNTANT
JO JOURNALIST
CS COMMISSARYMAN
SH SHIP'S SERV

MISCELLANEOUS GROUP VI

PI PRINTER (To be combined with LI)
LI LITHOGRAPHER
DM DRAFTSMAN
MU MUSICIAN

RED STRIPES

ENGINEERING AND HULL GROUP VII

DC DAMAGE CONTROLMAN
MM MACHINIST'S MATE
EN ENGINEMAN
MR MACHINERY
IC I. C. ELECTRICIAN
BT BOILERMAN
ME METALSMITH
FP PIPE FITTER
ML MOLDER

LIGHT BLUE STRIPES

CONSTRUCTION GROUP VIII

BU BUILDER
SV SURVEYOR
CD DRIVER
SW STEELWORKER
CE CONSTRUCTION ELECTRICIAN'S

GREEN STRIPES

AVIATION GROUP IX

AD AVIATION MACHINIST'S MATE
AO AVIATION ORDNANCE MAN
AL AVIATION ELECTRONICSM
(To be merged with
PR PARACHUTE RIGGER
AG AEROGRAPHER'S MATE
AC AIR CONTROLMAN
AK AVIATION STOREK
AM AVIATION STRUCTURAL MECHANIC
TD TRADEVMAN
AB AVIATION BOATSWAIN'S MATE
PH PHC
AQ AVIATION FIRE CONTROL TECHNI

NAVY BLUE STRIPES

MEDICAL GROUP X

HM HOSPITAL CORPSMAN

DENTAL GROUP XI

DT DENTAL TECHNICIAN

STEWARD GROUP XII

SD STEWARD

‡ TE is bei
out over

Prepared by ALL HANDS Magazine

...OR ENLISTED PERSONNEL

E-7

WARRANT OFFICERS

GOLD BLUE
W-1

GOLD BLUE
W-2

SILVER BLUE
W-3

SILVER BLUE
W-4

COMMISSIONED OFFICER PROGRAMS

(Insignia not approved)

...MAN

NW
NUCLEAR WEAPONS MAN

...K
...ISBURSING CLERK

CT
COMMUNICATIONS TECHNICIAN

EM
ELECTRICIAN'S MATE

...KER

BR
BOILERMAKER

...LITIES MAN

CM
MECHANIC

...ON ELECTRONICS TECHNICIAN
...h 1958)

...ATION ELECTRICIAN'S MATE

...S MATE

...IATION GUIDED MISSILEMAN

...blished—to be phased ... period to RM or YN.

BOATSWAIN (713)
(BM, QM, SM, *GM)

UNDERWATER ORDNANCE TECHNICIAN (733)
(TM, *MN)

MINE WARFARE TECHNICIAN (734)
(MN, *TM)

ELECTRICIAN (754)
(EM, IC)

SHIP REPAIR TECHNICIAN (774)
(DC, FP, ME, ML, PM *BR)

EQUIPMENT FOREMAN (749)
(CM, CD, UT)

CONSTRUCTION ELECTRICIAN (759)
(CE, *UT)

BUILDING FOREMAN (779)
(BU, SW, DM, SV)

SUPPLY CLERK (798)
(DK, SK, AK, CS, SH, SD)

PHOTOGRAPHER (831)
(PH, *JO)

AVIATION ELECTRONICS TECHNICIAN (761)
(*GF, *AQ, AE, AL/AT, TD)

AVIATION ORDNANCE TECHNICIAN (721)
(AO, GF, AQ)

SURFACE ORDNANCE TECHNICIAN (723)
(GM, NW)

ORDNANCE CONTROL TECHNICIAN (724)
(FT, GS)

MACHINIST (743)
(MM, BT, MR, EN, IM, OM, BR)

COMMUNICATIONS TECHNICIAN (764)
(CT)

ELECTRONICS TECHNICIAN (766)
(ET, RM, TE/RM, *FT, *GS)
(*EM, *IC, RD, *SO, *TD)

SHIP'S CLERK (782)
(LI/PI, JO, PN, YN, TE/YN, MA)

BANDMASTER (785)
(MU)

MEDICAL SERVICE WARRANT (817)
(HM)

DENTAL SERVICE WARRANT (818)
(DT)

AEROGRAPHER (821)
(AG)

AVIATION MAINTENANCE TECHNICIAN (741)
(AD, AM, *AE)

AVIATION OPERATIONS TECHNICIAN (711)
(AB, AC, PR)

*Eligible ratings in path of advancement are listed in parentheses after WO Specialty. *Asterisk indicates this is an alternate path of advancement for the rating so marked.*

✶ USNA

The United States Naval Academy is open to unmarried, male, high school graduates between the ages of 17 and 22. Appointments are usually obtained through U. S. Congressmen or by competitive examination in the fleet.

✶ NROTC

Applicants for Naval Reserve Officer Training Corps must be unmarried, male high-school graduates between the ages of 17 and 21. Selections for this program leading to a baccalaureate degree as well as a commission are made annually from candidates on active duty as well as personnel on inactive duty, and civilians.

✶ NAVCAD

The Naval Aviation Cadet program is designed for unmarried men who have successfully completed two years of college (60 semester hours of unduplicated studies), or have 30 semester hours with a combined GCT–ARI score of 120 and MECH of 58 (USAFI College Level GED test will be accepted in lieu of the 30 semester hours of college). This program is primarily designed for men who do not intend to complete college at a later date. Applicants must be unmarried, between the ages of 18 and 25 years, have good eyesight and no known physical defects.

✶ OCS

There are no marital restrictions for Officer Candidate School training. All applicants must hold at least a bachelor's degree. All line, supply and civil engineering applicants must be between the ages of 19 and 27. Other categories must be under 33 years. Physical requirements vary according to the program.

✶ INTEGRATION

Male applicants must be at least 19 and under 32½ years of age as of 1 July of the year in which appointment can be made. Women applicants must be at least 21 and under 29½ years of age. Applicants' physical requirements may vary according to the program. Warrant Officers and CPOs must have 3 years in grade in either of these combined grades or rates. Four years in rate are required below CPO.

✶ AOC

Applicants for the Aviation Officer Candidate program must be male college graduates between the ages of 19 and 26 with good eyesight and no known physical defects. There are no marital restrictions.

✶ LDO

Those who have not reached their 35th birthday as of 1 July of the year in which appointment can be made are eligible for appointment as Limited Duty Officer. In some cases the age limit is raised to 38. Male enlisted PO1s and above having served in rate for 1 year are eligible; must have completed 10 years of active service and be high school graduates or service-accepted equivalent.

ment in the NROTC college. However, those who have enough college credits to qualify for advanced training may be accepted beyond the age of 21. In any case, applicants may not be more than 25 years old on 1 July of the year of graduation.

Candidates are selected on the basis of Naval College Aptitude Test scores and physical qualifications.

"Regular" NROTC students receive retainer pay of $50 a month, their uniforms, and a four-year government-paid college education, including cost of tuition and books.

In addition to about 2000 civilians and inactive Reservists, the Navy has a quota for 200 enlisted men on active duty who can qualify through competition in the Naval College Aptitude Test. These provisional selectees are ordered to the U. S. Naval Preparatory School, Bainbridge, Md., for an 8- to 10-week refresher course and for final selection for the NROTC four-year college program. Applications by personnel on active duty should be submitted to the Chief of Naval Personnel via your commanding officer.

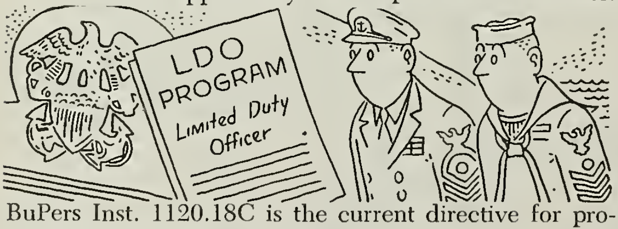
Upon completing the Bainbridge course, which is given during the summer, the selected candidates are appointed midshipmen (while still retaining their enlisted status) and are ordered to one of the 52 colleges or universities offering the NROTC curriculum, Students not selected are returned to the Fleet for duty.

Details of this program are contained in Arts C-1202, C-1204, *BuPers Manual* and BuPers Inst. 1111.4B.

- ***NROTC Contract Students***—Students in NROTC colleges are also eligible to apply for enrollment as *NROTC contract* students. This is a nonsubsidized program leading to a Reserve commission. The "contract student" program is not open to active duty enlisted personnel.

LDO Program

The LDO program gives the Navy's outstanding young men an excellent chance for advancement. While the number of commissions awarded each year is not large in proportion to the number of applicants, there is a definite opportunity for top-notch candidates.



BuPers Inst. 1120.18C is the current directive for procurement of personnel in this program.

- ***Requirements***—The program is open to Regular Navy personnel who:

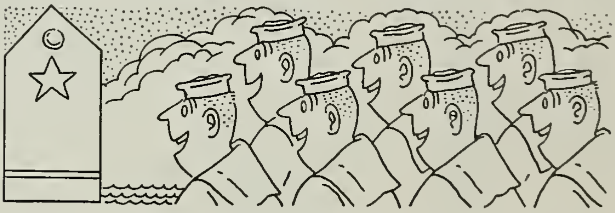
Hold the permanent rank or rating of chief warrant officer, warrant officer, chief petty officer or petty officer first class, within the age limits, as noted below.

Have completed 10 years of active naval service, exclusive of training duty in the Naval or Marine Corps Reserve, on or before 1 April of the year in which the appointment can first be made. (Marine Corps service may be included.)

Have served as PO first class or higher for at least one year as of 1 April of the year in which the appointment can first be made, and be so serving on that date.

Have not reached their 35th birthday as of 1 July of the year in which the appointment can first be made—in most cases. (In the case of an individual who is serving or has served, in a temporary commissioned grade of lieutenant (junior grade) or above, the age limit is raised to 38 years.)

- If enlisted, you must have no record of conviction by deck court, summary court-martial or general court-martial for the two years preceding the date of written examination.
- Applicants must be able to meet the physical standards prescribed for original appointment in the Navy for the corps to which appointed.
- ***Eligible personnel*** may apply every year until selected, or until they become ineligible, and may apply each year for not more than TWO categories. HM, DT, PH and MU ratings may apply for those categories for which they are considered qualified. If selected, all original appointments will be temporary appointments in the grade of ensign. Upon making LTJG, temporary LDOs will become eligible for augmentation as permanent LDOs in numbers allowed by the law, or as unrestricted line or staff officers as applicable. LDO temporaries will remain eligible for augmentation through the grade of LT. Career patterns will be identical for both permanent and temporary LDOs.



- No candidate will be eligible for appointment in LDO status if his conduct and associations are such that reasonable grounds are established for rejection by BuPers on the grounds of loyalty.
- All candidates must be high school graduates, or have satisfactorily completed the service-accepted equivalent—the USAFI GED test (high school).

Some people are not eligible, regardless. These are officers who have transferred to the Regular Navy as permanent USN officers above the rank of chief warrant officer, retired personnel and members of the Fleet Reserve or Naval Reserve, among others.

By 20 March your commanding officer should submit by speedletter or other suitable rapid means to the Chief of Naval Personnel (Attn: Pers-B625), the name, rate, service number, and classification for which application will be made, of all prospective candidates in his command.

- By 15 June the CO must complete a special evaluation report on you and at the same time you must submit your formal application as prescribed in the current instructions. The application will be followed by a written exam in three parts: a general officer aptitude test; a test on military knowledge and naval administration (A to N type); and an Educational Level Determination Test, including in its areas, history, science, mathematics and English.

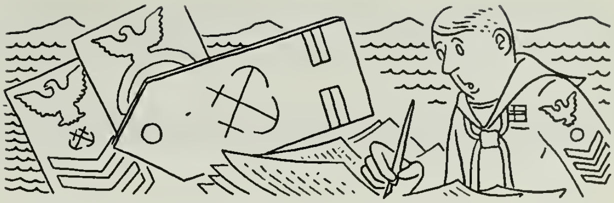
Check BuPers Inst. 1120.18C for further details on application.

Warrant Officer Program

The Warrant Officer Program W-1 is open to eligible enlisted men and women serving on active duty as CPOs or PO1s in the Regular Navy and Naval Reserve (including TARs). The requirements and procedures for it are as follows:

- **Age**—If you originally enlisted in the Navy, Naval Reserve or Coast Guard (when operating under the Navy) before 15 Sep 1945, you must not have attained your 39th birthday as of 1 July of the year following that in which application is made. If you originally enlisted after 15 Sep 1945, you must not have reached your 35th birthday as of 1 July of the year following that in which application is made.
- **Service**—Applicants must have completed six years of active service, computed to 1 April of the calendar year in which appointment could first be made.
- **Education**—There are no specified educational requirements for the WO program.
- **Physical**—Applicants must meet physical standards established by the Chief, Bureau of Medicine and Surgery. Minor defects, which do not interfere with satisfactory performance of duty and which are not likely to preclude the completion of 20 years' total active and full duty following appointment, will not be considered disqualifying. However, applicants who are on the sick list, on sick leave, or limited duty, or who are awaiting final action on reports of medical boards shall be considered not physically qualified.
- **Dependency**—Women applicants must meet the dependency requirements set forth in Paragraph 2, Article C-1102, *BuPers Manual.* There are no dependency requirements for men.
- **Discipline**—For the two years preceding the date of application, the applicant must have no record of conviction by a general, special or summary court-martial, or conviction by a civil court for any offense other than minor traffic violations.
- **Obligated Service**—Personnel eligible, or becoming eligible, for retirement must, if selected, agree not to apply for voluntary retirement until they have completed three years of service as a warrant officer. Otherwise, there are no obligated service requirements.
- **Loyalty**—No candidate will be eligible for appointment if his conduct and associations are such that reasonable grounds are established for rejection by BuPers on the grounds of loyalty.
- **Application Procedures**—Details on the WO Program are contained in BuPers Inst. 1120.18C. *Be sure to check it for complete information.* However, here are the application procedures in brief:

On 1 March of the year preceding the calendar year in which the appointment can first be made, the applicant after making sure he is eligible, submits a written request to his commanding officer, stating the technical specialty in which he would like to be appointed, the program or programs for which he wishes to be considered (he can apply for the Integration, LDO and WO Program, all at the same time) and his order of preference among the programs.



Between 1 March and 15 June the commanding officer observes all applicants under his command, and at the end of that time he prepares a CPO and PO1 Evaluation Sheet (NavPers 1339-Revised) on each of them. This is in addition to the regular Evaluation Sheet which becomes a part of the enlisted service record. During that period, the applicant is also given a physical examination and interviewed by a board of three officers to determine the applicant's officer-like qualities.

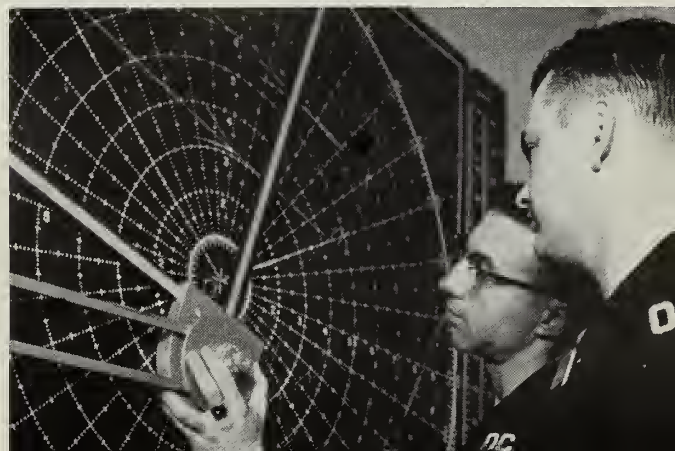
On 15 June (or the next working day thereafter, in case that date falls on a Saturday, Sunday or holiday), all applicants participate in a Fleet-wide competitive examination. This consists of three parts—General Aptitude, A to N type and General Educational Level Determination (which consists of questions on history, science, mathematics and English). The CO then forwards examination material and results to the Naval Examining Center, Great Lakes, Ill.; cutting scores are established by the Chief of Naval Personnel; and all personnel below the cutting score are disqualified.

Also on 15 June the prospective applicant submits to his commanding officer a formal Application for Appointment NavPers 953 together with the other papers and forms listed in BuPers Inst. 1120.18C or latest revisions. This material is forwarded to the Chief of Naval Personnel (Pers-B625) for use by a selection board which convenes each February.

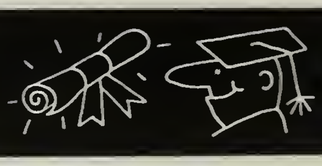
- **Selection**—All applicants selected for appointment as WOs are placed on a waiting list in order of preference for appointment. Appointments are issued periodically according to the needs of the service.

On 30 June of each year the waiting list becomes invalid and is superseded by a new one. Personnel still on a waiting list as of 1 March are advised to apply for the program again, since they might not be appointed before the new list is issued.

Except for Code 798X warrant officers (who take a six-month training course at the Navy Supply Corps School, Athens, Ga.) and 766X warrant officers appointed from ratings other than ET (who are ordered to a one-year course in Electronics at Great Lakes, Ill.) newly appointed WOs are ordered to ships or activities which have allowances for their technical specialties. An enlisted naval aviation pilot will not be continued in a status involving flying if he's appointed a WO.



education and training



IF YOU'RE GOING to get anywhere in life—either as a Navyman or as a civilian—one of the best ways to do it is by taking advantage of opportunities to learn. And the Navy is a mighty good place to do just that.

The day a Navyman enters boot camp or one of the officer procurement programs he begins acquiring new knowledge and putting that knowledge to work. Later, in technical schools and courses, in performing the duties of his rank or rating or in programs designed to help him further his academic education, he acquires additional training that can pay big dividends in his future—regardless of whether he follows a Navy career or a civilian one.

For a brief roundup of the educational facilities offered by the Navy, read on, and check also the section on paths to a commission, which begins on page 37.

Educational Opportunities for Enlisted Men

In recruit training you begin learning about the Navy through such subjects as naval terminology, discipline and regulations.

This training may come from books, salty boatswain's mates or your own experience. No matter what its source, it may be listed as education, for in a few short weeks at the Naval Training Center you undergo the transformation from civilian to sailor.

Upon reporting aboard ship your first assignment from your division PO is a study of the ship's organization chart and the watch, quarter and station bill. That starts you on your post-boot camp studies.

Within the next few weeks you learn details concerning your ship, your job, your duties and your new shipmates. Before long you have enough time in to go up for SN and you have to do a bit of studying for the examination. When that is behind you, it's time to decide just what rating you want to strike for and then start working toward the examination for third class.

Navy Training Courses

At this time you become acquainted with the Navy Training Courses. These are comprehensive, compact, paper-covered books designed to help you train for the rate you hope to get. There are some 190 of these Navy Training Courses now printed and the Chief of Naval Personnel has a group of writers and technical specialists to keep the courses up to date. These Navy Training Courses may also be studied in connection with Enlisted Correspondence Courses, which provide a "home-study" program enabling you to keep up with your rate (see page 46).

Naval Schools

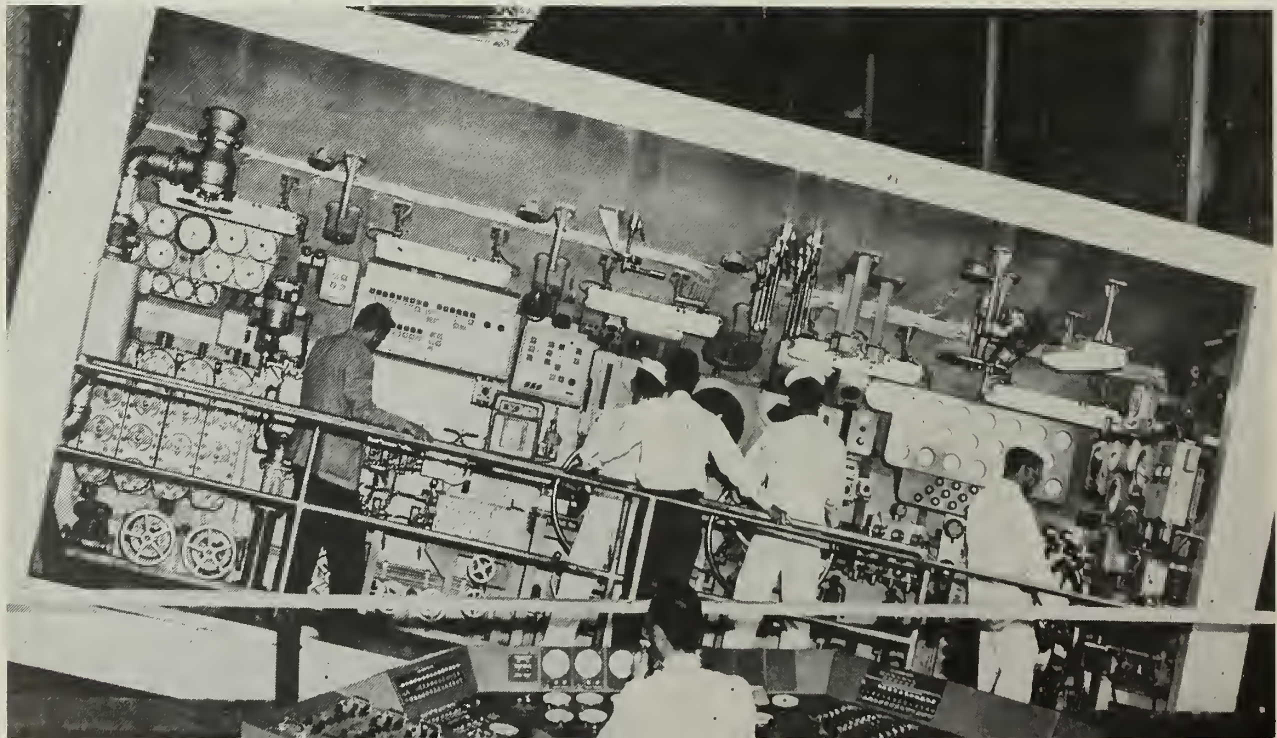
Scattered throughout the Naval Establishment are numerous specialized schools and courses established to meet the navy's demands for personnel trained in many unique skills and occupations.

These schools cover a range of courses from basic instruction to highly advanced work.

There are currently several hundred naval schools in operation throughout the United States. Here is a sampling of some of the personnel they train: Disbursing clerks, drivers, electronics technicians, enginemen, opticalmen and instrumentmen, journalists, personnel men, radiomen, steelworkers, commissarymen, instructors, deep sea divers, sonarmen, minemen, hospital corpsmen, dental technicians, aviation machinist's mates, photographer's mates, aviation electronics technicians, aviation ordnancemen, and aviation electrician's mates.

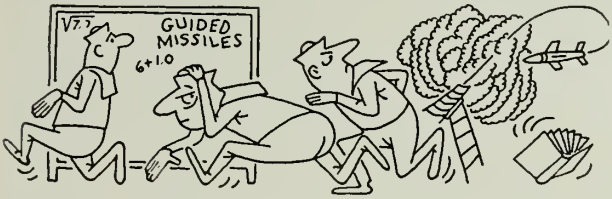
They also teach such subjects as teletype maintenance, welding, guided missiles, harbor defense, etc.

The naval schools are divided into several classes:



- ***Class P Schools*** are designed to conduct training at a preparatory level.

- ***Class A Schools*** and courses are, in general, designed to provide the basic technical knowledges and skills required to prepare personnel for the lower petty officer rates.



- ***Class B Schools*** and courses are designed to provide the advanced technical knowledges and skills required to prepare personnel for the higher petty officer rates.

- ***Class C Schools*** and courses are designed to train enlisted personnel in a particular skill or technique which, in general, is not peculiar to any one rating. Class C Schools are further divided into subclasses, namely: Class C-1 Schools which include all Class C Schools located in naval establishments and Class C-2 Schools which include all special schools, recognized by the Chief of Naval Personnel and operated in civilian manufacturing plants.

- ***Functional Schools*** provide training to personnel, often in a group or team situation, in the performance of specialized tasks or functions which are not normal to rating training of enlisted personnel nor to professional training of officers. In addition, these schools provide training on weapons of new or advanced design which have not reached universal Fleet usage.

- ***Fleet Schools*** provide refresher and team training to personnel who normally are members of ships' companies.

- ***The Navy Enlisted Advanced School Program,*** established in 1956, provides a total of four years of advanced technical training in engineering to selected petty officers. These four years of schooling are not continuous. After two years in school the student spends not less than four years in service and operating assignments, then goes back to school for another two years. Currently, petty officers studying under this program attend Purdue University, and in future years the Navy plans to increase the number selected for this type of training.

Your election for a Navy service school depends upon many factors—your rate and rating, your time in service and the school you want to attend. For more detailed information on service schools check with the personnel office for a look at the *Catalog of U. S. Naval Training Activities and Courses* (NavPers 91769-B), BuPers Inst. 1500.25 (which contains convening dates for classes) and the "Naval Air Technical Training Bulletin." These are available from your ship's office, the training officer or the I & E officer at your duty station.

Other Training is Available

Once you have decided that the Navy is to be your career, you'll have to look forward to the time when you will be going up for PO1 and, eventually, Chief. The competition gets tougher then, and the thing to do is to be better prepared than the other guy. So you keep the books near, work hard at your job and keep studying.

At first it seems that you're kept pretty busy with studies needed for promotion. But you may decide that those studies won't really take up too much of your time and you want to know even more. You'll find out then that you can finish your high school education or even go to college without ever leaving your ship. To do this you start out by talking things over with your I & E officer and filling out an application.

That application goes to the United States Armed Forces Institute, an organization keyed to the serviceman's needs. USAFI itself has scores of high school and college correspondence courses available to military men. In addition, they have a working agreement with many colleges and universities throughout the United States to supply courses to servicemen.

U. S. Armed Forces Institute

Here is a general summary of what USAFI offers the enlisted Navyman or officer:

- ***USAFI Correspondence Courses***—For correspondence course study USAFI will provide text material, a study guide and a supply of paper and envelopes. You study the text, and prepare a series of lessons to be mailed to the nearest USAFI branch. An instructor grades each lesson and offers suggestions or guidance to help you over the rough spots in the course. With very few exceptions, all correspondence courses have end-of-course tests to be taken when you have finished the lessons.

- ***USAFI Self-Teaching Courses***—These courses generally consist of the same text and study materials used in the correspondence courses. In a self-teaching course, however, you're strictly on your own. The texts pro-

vide study suggestions and outlines, but there is no lesson-grading service. Most self-teaching courses have end-of-course tests.

- ***Group Study Course***—This is conducted in much the same way as a formal school course—with an instructor and regularly scheduled classes. Any course may be taught by this method when there are enough students and your ship or station has the facilities.
- ***Correspondence Courses Offered by Participating Colleges***—USAFI course offerings are supplemented by many courses from colleges that participate with USAFI. These courses are made available to uniformed personnel for about half their normal cost; they are similar to the USAFI correspondence courses in content and lesson procedure. Following enrollment, however, all correspondence takes place directly between you and the college or university.

The list of courses available through USAFI is too long to publish here, but your I & E officer has all the information and necessary application blanks. Just to give you an idea, a few of the courses available (picked at random) are: Business Management, Aeronautics, Beginning French, Industrial Electricity, Blueprint Reading, Journalism, English Literature, Fundamentals of Radio, Sheet Metal Drafting, Psychology, Refrigeration and Physics.

High School and College Credits

It is possible that your Navy training and experience may be credited toward a high school diploma or toward certain college courses.

For example, in addition to end-of-course tests for courses mentioned above, USAFI offers a testing service for: comprehensive examinations for the measurement of general education development (high school and college level GED tests); and achievement tests for the elementary grades.

It should be noted that neither USAFI nor the Navy can give civilian academic credit for USAFI courses and tests. It is the responsibility and privilege of civilian high schools, colleges, and state departments of education to determine the amount and kind of civilian credit given, if any, for in-service education.

Many schools do grant credit, however, for USAFI courses and for formal service school training. The Commission on Accreditation of Service Experience (CASE) maintains an advisory service to assist civilian educators in evaluating in-service educational experience by recommending credits for USAFI courses, and tests, and for service schools. Your I & E officer will help you write to your school concerning accreditation matters.

Regardless of the course you take, the Navy recognizes all USAFI courses and tests for credit as recommended by CASE. Also, the service record of each Navyman contains a running account of his educational accomplishments, including any work completed through USAFI.

The Navy uses your educational record in much the same way as any other employer would—deciding placement problems, your further training, and promotions (particularly from enlisted to officer) on the basis of your education and experience.

USAFI courses, texts and examinations can be very helpful in preparing for officer selection exams and for specific training programs. For example, certain USAFI courses are recommended for study in connection with the Integration, LDO and Warrant Officer selection examinations, the preliminary examinations for the Naval Preparatory School, and for individuals assigned to the Nuclear Power School. If you're preparing for an officer selection exam, your I & E officer can help you decide whether a review of several USAFI texts might be the best procedure, or whether it would be advisable for you to enroll in a specific USAFI course.

The USAFI enrollment fee is reasonable—only $2. That entitles you to take as many courses as you desire. So, the door is open. All you have to do is walk in.

Tuition Aid Program

For naval personnel (officer and enlisted) stationed near accredited colleges, universities or junior colleges, or having access to branches of such institutions, the Navy will pay three-quarters of the cost of tuition (up to a limit of $7.50 per semester hour) for courses taken in off-duty time at one of these schools. Courses for which financial assistance is provided are limited (with some exceptions) to six semester hours per semester. They must also contribute to the improved performance of duty or the professional capabilities of the individual, or to qualifications for a baccalaureate degree. (Your I & E officer can give you more complete details.)

Enlisted Correspondence Courses

Should you decide that instead of college credit you want more knowledge about the Navy you can turn to a Navy outfit, the U. S. Naval Correspondence Course Center. The center has hundreds of courses that you may take, either within your rate, or for general information.

All enlisted personnel, whether on active or inactive duty, may apply for the courses, which are intended to help a man prepare for his job and for advancement in rating. Successful completion of a Correspondence Course is only one way of meeting the requirement for studying applicable Navy Training Courses. Individual commands have the authority to examine a man on his Navy Training Course and to certify that he has completed it. He is not *required* to complete a Correspondence Course.

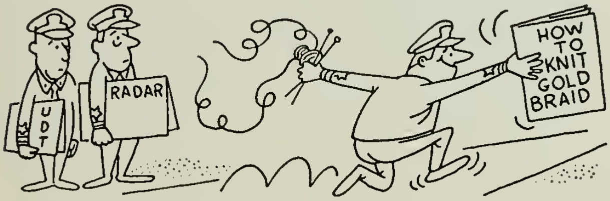
If you want to take a course (and are on active duty) see your division officer or your education officer and ask for Form NavPers 580, "Application for Enlisted Correspondence Course."

These applications should then be sent to the U. S. Naval Correspondence Course Center, Naval Supply Depot, Scotia 2, N.Y., via your CO.

training for officers

EXPERIENCE MIGHT BE a fine teacher, but you can't run a complex, modern Navy on experience alone. For that reason, the Navy has set up many training programs and numerous schools to give its officers the technical information they need as they advance up the promotion ladder. And, from ensign to admiral there are schools to attend and lessons to learn.

The number of courses and schools available, first as a junior officer and later as senior, is much too great to permit listing each of them. However, here's a brief rundown of the various types of courses and schools.


UDT
RADAR
HOW TO KNIT GOLD BRAID

In addition, the educational opportunities mentioned above, concerning *Armed Forces Institute* (USAFI) courses and facilities (page 45) and the *Tuition Aid Program* (page 46) are also available to officers.

Technical Courses

Officer technical courses, other than postgraduate instruction, are conducted to provide special instruction, normally for junior officers, and refresher instruction in various technical specialties to meet the needs of the service.

All of the technical courses are six months or less in duration with the exception of the electronics course at the Naval School, Electronics Officers, Great Lakes, Ill., which is one year. The number and variety of the technical courses are subject to change in accordance with new requirements and technological developments. Details on these courses are published in the *Catalog of the U. S. Naval Training Activities and Courses* (NavPers 91769-B). The following courses or schools for selected personnel are typical of those offered in the technical field:

Atomic, Biological, Chemical Warfare Defense Course.
Damage Control School.
Instructor Training School.
Photographic Interpretation Course.
Torpedo Course.

In addition there are many aviation courses available. Details on these can be found in the latest "Bulletin of Schools and Courses" issued by the Naval Air Technical Training Command. Some of these are:

Aviation Ordnance School.
Target Drone School (enlisted and officers).
Naval Photographic School.
Aviation Electronics School.
Combat Information Center School.
Aircraft Maintenance Course.
Aviation Ground Officers School.
Ground Controlled Approach Course.
Catapult and Arresting Gear Course.

Nontechnical Courses

Special courses of instruction which are not clearly included under the technical classification are known as nontechnical courses. The number of nontechnical courses varies from time to time in accordance with the needs of the Navy. Details regarding course lengths, convening dates, etc., are published in BuPers Notice 1500.25. Typical nontechnical courses include *foreign language instructional courses and Naval Justice School.*

Functional Training Courses

Functional Schools are available for the training of

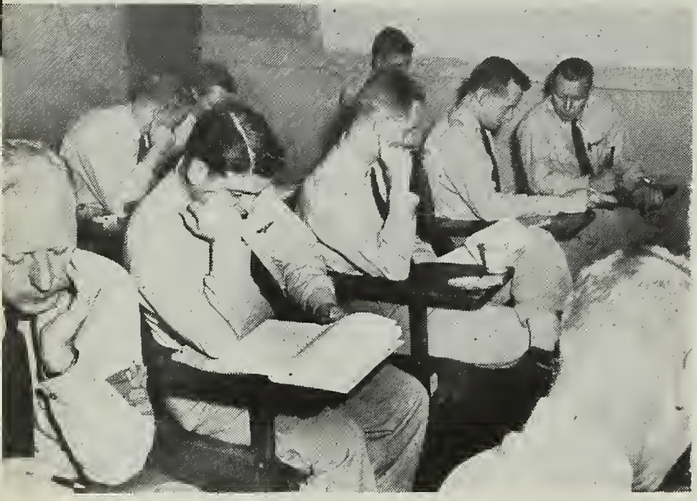
officers, often in a group or team situation, in the performance of specialized tasks or functions. They also provide training on weapons of new or advanced design which have not reached universal Fleet usage.

Some of these functional schools are:

Net School, Harbor Defense, Mine Warfare, Ship Salvage, Explosive Ordnance Disposal, Guided Missiles, Advanced Undersea Weapons, Deep Sea Diving School and *Nuclear Power Training Units.*

Schools which provide operational training ashore for personnel assigned directly from units of the forces afloat are maintained under the administration of Fleet commanders. Among these are:

Sonar Schools, Submarine School, Amphibious Schools, Fleet Gunnery, CIC Team Training Centers, Fleet Training Centers, Fleet Air Defense Training Centers, and *Submarine Training Facilities.*



Staff Corps Schools

Naval schools for the training of Supply Corps officers are: *Navy Supply Corps School,* Athens, Ga.; *Naval School, Freight Transportation,* Oakland, Calif.

Courses for newly commissioned Civil Engineer Corps officers are conducted at the *Naval School, CEC Officers,* Port Hueneme, Calif.

The training of Medical Department personnel, including officers of the Medical Corps, Dental Corps, Medical Service Corps, Nurse Corps, Hospital Corps, and enlisted members of the Hospital Corps, is the responsibility of the Chief of the Bureau of Medicine and Surgery. Announcements of scheduled training are made by the Chief of that bureau.

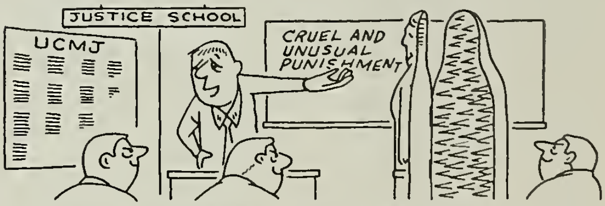
Naval Postgraduate School

The U. S. Naval Postgraduate School at Monterey, Calif., consists of the *Engineering School,* the *Navy Management School* and the *General Line School.* The Engineering School provides advanced engineering education through special programs at Monterey and through the supervision of education at various civilian institutions throughout the country. The Navy Management School provides management education at the graduate level, and the General Line School provides advanced professional and academic education.

The Postgraduate School year consists of five terms of 10 weeks each. Officers selected for the Engineering School report in August of each year. The courses at the Management and General Line Schools convene semi-annually, with officers reporting in January and August of each year. Here is a brief summary of each:

- **Engineering School**—The curricula available, conditions of eligibility and other pertinent data are published annually in Bureau directives. Detailed information is given in the *Annual Postgraduate School Catalog,* which is given wide distribution. Selection is made by a board appointed by the Chief of Naval Personnel. Available courses, which include a variety of professional, technical and nontechnical subjects are:

Advanced Management, Advanced Science, Aerology, Aeronautical Engineering, Business Administration, Civil Engineering, Chemical Engineering, Communications Engineering, Comptrollership, Electrical Engineering, Engineering Electronics, Hydrographic Engineering, Intelligence, Judge Advocate Officers Advanced Course (Army), Management and Industrial Engineering, Mechanical Engineering, Metallurgical Engineering, Mine Warfare, Naval Architecture, Naval Construction and Engineering, Nuclear Engineering (Advanced), Nuclear Engineering (Effects), Oceanography, Operations Analysis, Ordnance Engineering, Personnel Administration and Training, Petroleum Administration and Management, Petroleum Engineering, Petroleum Logistics, Public Information, Religion and Social Science.



- **Navy Management School**—Management School training is intended to foster individual growth, problem-solving ability and initiative through the application of sound management techniques. The curriculum consists of basic foundation courses in management, upon which are superimposed special courses to provide management training for selected officers. Conditions of eligibility are included in the annual Postgraduate directive. Officers are selected by the Postgraduate Selection Board.

- **General Line School**—General Line School training is designed to broaden the mental outlook and increase the professional knowledge of line officers. It is normally available to Regular career officers during their first tour of shore duty, and officers are assigned to it by the Chief of Naval Personnel as they become eligible and available.

The curriculum includes training in such subjects as leadership, navigation, ordnance and gunnery, seamanship, engineering, damage control, communications, strategy and tactics, logistics and intelligence. The function of a naval officer as an administrator is emphasized through such studies as naval organization, personnel management and methods of training and classifying personnel. This course also includes indoctrination in social, economic and scientific relationships of the naval service to the world at large.

In addition, the student's knowledge is broadened in the areas of naval warfare and the relationships of the Navy to other branches of the armed forces. The completion of this curriculum will enable the officer to meet the duties, responsibilities and complexities of higher rank.

Naval War College

The courses available at the Naval War College are designed for officers in the more senior grades (usually lieutenant commander and up) to further an understanding of the fundamentals of warfare, international relations, and inter-service operations, with emphasis on their application to future naval warfare:

The courses at the Naval War College include:

Advanced Study in Strategy and Sea Power.
Naval Warfare Course I and II.
Command and Staff Course.
Flag Officers Refresher Course.

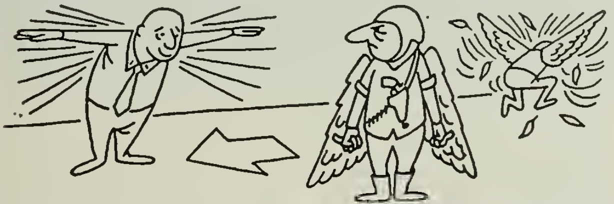
National War College

The National War College prepares selected personnel of the armed forces and other government departments for the exercise of joint high-level policy, command and staff functions, and for the performance of strategic planning duties in their departments.

The National War College course lasts 10 months. Eligibility for the Navy quota is limited to those officers with 15 to 24 years of commissioned service.

Industrial College of the Armed Forces

The Industrial College of the Armed Forces prepares officers of the armed forces for important command, staff and planning assignments in the Department of Defense and prepares selected civilians for important industrial mobilization planning assignments in any government agency.



The course is 10 months long. Eligibility for the Navy quota is limited to officers with 15 to 24 years of commissioned service.

Armed Forces Staff College

The Armed Forces Staff College trains selected officers of the armed forces in joint operations.

Naval officers to attend the Armed Forces Staff College are selected from that group of naval officers who have had 9 to 16 years of commissioned service.

Rhodes Scholarships

Selected naval officers may compete for Rhodes Scholarships which afford an opportunity for the broadening experience of foreign study and which provide a firm educational foundation for future assignments of responsibility in the military fields of foreign affairs and politics. Rules and procedures for these scholarships are published annually in BuPers Notices.

Aviation Training

Two courses of flight training are available for officers—heavier-than-air and lighter-than-air.

Selections of officers for heavier-than-air flight training are made by the Chief of Naval Personnel from officers who make application and who are physically qualified. Selections for lighter-than-air flight training are made by the Chief of Naval Personnel from among qualified heavier-than-air pilots.

Detailed information concerning eligibility requirements and submittal of applications for flight training is published in the Navy Directives System.

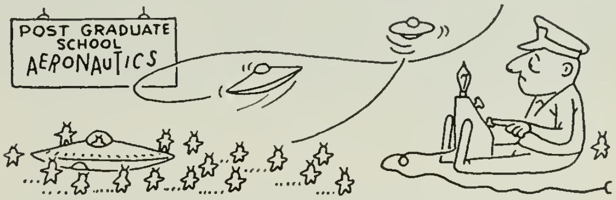
While undergoing flight training, officers, other than qualified heavier-than-air pilots, are designated student naval aviators. After completing the prescribed courses and when reported as fully qualified, they are designated Naval Aviators. Naval Aviator qualifications are described in Article C-7301 of the *BuPers Manual.*

Naval Aviation Observer qualifications are listed in Article C-7302.

Submarine Training

Classes for submarine duty are assembled at the Naval Submarine Base, New London, Conn., in the first weeks of January and July. The length of this course is six months.

Officers are selected for submarine training by the Chief of Naval Personnel and are given permanent duty orders. Directives calling for applications for this training are issued by the Bureau about five months before each class convenes. Your request for this training, with your commanding officer's recommendation, must be submitted to the Chief of Naval Personnel. Requests must be accompanied by a statement from a medical officer that you are physically qualified in accordance with existing instructions of the Bureau of Medicine and Surgery. Upon successful completion of the course at the Submarine School, New London, you will normally be ordered to duty in submarines.



The requirements for qualification in submarines are enumerated in Article C-7304, *BuPers Manual.*

Officer Correspondence Courses

Officer Correspondence Courses—nearly a hundred of them—are offered by the U. S. Naval Correspondence Course Center at Scotia, N. Y., and by certain other activities providing specialist training, to give Regular and Reserve naval personnel the opportunity to increase their knowledge and understanding of the Navy and, at the same time, prepare themselves for professional advancement.

The Officer Correspondence Courses are designed to instruct commissioned officers and warrant officers, and are also open to chief petty officers. In addition, enlisted personnel of lower ratings are also eligible if they are recommended for enrollment by their commanding officers.

The courses range in subject from Naval Arctic

education and training

Operations and Marine Navigation to International Law and Foundations of National Power.

In addition to courses administered by the Naval Correspondence Center there are a number of courses administered by the Chief of the Bureau of Medicine and Surgery, Chief of Naval Operations, Naval Submarine School, Naval War College, Naval Intelligence School and the Industrial College.

Applications for Naval Correspondence Center courses made by personnel on active duty must be submitted, via commanding officer, on NavPers Form 992 (Rev 10/54 or Rev 2/56).

A catalog of all the courses available from the Correspondence Course Center is contained in the *List of Training Manuals and Correspondence Courses,* NavPers 10061-E.

Five-Term College Training Program

The Five-Term College Training Program gives an eligible USN officer, who has been commissioned through "augmentation" or "integration," the chance to complete his education and obtain a baccalaureate degree. (Augmentation is the set-up under which highly qualified Reserve officers may obtain USN line commissions. Integration enables top enlisted personnel to obtain Regular Navy appointments.)

With some exceptions, this program is open to commissioned officers of the line, 1100 and 1300 category, and Supply Corps officers, 3100 category, with a permanent grade of ensign or higher, but below the grade of commander, who have been augmented or integrated since 1 Jan 1949. To qualify you must apply to the Chief of Naval Personnel and be accepted by any NROTC university (or George Washington University), with an advanced standing of 45 semester hours or equivalent quarter hours. The credit hours, providing they are acceptable to the school, may have been earned through the General Educational Development Test, USAFI Corrspondence Courses, service schools, the completion of an accredited college course, or by various combinations of these.

If you are eligible, and accepted for enrollment by the university, you will be ordered to that university for whatever further schooling you need to obtain a baccalaureate degree—up to a maximum of five semesters or seven quarters.

This is a very brief summary of the program. For complete information see BuPers Inst. 1520.48A.

leave and liberty

LIBERTY AND LEAVE, whether it's a one-night fling or a long, well-planned vacation, is always a topic of discussion among Navymen and something they look forward to.

As you know, the granting of liberty and leave is controlled by your commanding officer in accordance with instructions set forth in the *Bureau of Naval Personnel Manual.* Your CO has the authority to grant liberty which authorizes you to be away from your duty station for periods up to 48 hours without being charged as leave. The normal 48-hour liberty period can be extended up to 72 hours if the period includes a national holiday proclaimed by the President or Secretary of the Navy.

At some very remote stations, COs have been authorized by the Chief of Naval Personnel to extend liberty up to 96 hours. Your chances of being assigned to one of these "remote" stations are slim, as there are only a few. In no case will liberty ever be used to extend leave periods.

At various ships and stations, you'll run across a number of different types of liberty schedules. Aboard ship you may have port and starboard or three and four section liberty, while on some shore stations liberty may range anywhere from three to 12 sections.

Under existing regulations, (The Armed Forces Leave Act of 1946, as amended) you're entitled to 30 days leave—that's one full month's vacation with pay—each year. You earn this at the rate of two and one-half days per month. You should be afforded the opportunity and be encouraged to take leave annually. However, it's up to your CO to determine when conditions permit that you take leave. He is governed by basic regulations contained in *BuPers Manual* plus the conditions that exist aboard your ship or station at the time you intend to take leave. If you do not take leave when afforded the opportunity, you may lose it later.

As of 1 July each year, you are only allowed to carry 60 days of accumulated leave "on the books." You will lose all earned leave in excess of 60 days on the beginning of the new fiscal year (1 July) or upon expiration of your enlistment.

Upon reenlisting, you may carry up to 60 days of earned leave over into your new enlistment or receive a cash settlement for all unused leave up to 60 days instead of taking the leave or carrying it over.

Here is a brief description of several types of leave that you may be granted, depending upon your situation:

- ***Advance Leave***—This is leave granted before you have earned it. Advance leave may not exceed the number of days that you will earn during the remaining period of your obligated service. For other restrictions see Articles 6202 and 6203, *BuPers Manual.*
- ***Earned Leave***—This is the name used for the number of days' leave credit you have "on the books." In other words, leave that you have already earned (at the rate of two and one-half days per month) but have not used.
- ***Emergency Leave***—In the event of death, sickness

or a serious emergency in your family, you may be granted emergency leave. The length of your leave will depend upon the nature of the emergency which exists. For emergency purposes, you may be authorized the total amount of your earned leave as well as 45 days' advance leave.

However, you cannot take more than 90 days' emergency leave at one time.

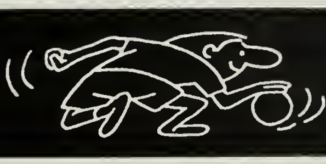
- ***Excess Leave***—This is not to be confused with advance leave. Excess leave is granted in addition to the amount of earned leave you have on the books and the amount of advance leave that may be granted. Excess leave is subject to checkage of your pay and allowances.
- ***Graduation Leave***—Is non-chargeable leave granted as a delay in reporting to the first duty station in the case of newly commissioned officers upon graduating from the U. S. Naval Academy.
- ***Leave upon Transfer***—Delay to count as leave, may be granted in connection with transfer orders to a new duty station, to and from school, or to and from temporary additional duty, provided it does not exceed 30 days, the amount of leave authorized in the orders, or conflict with the designated reporting date.
- ***Renlistment Leave***—May be granted upon reenlisting. Reenlistment leave is granted on the date immediately following reenlistment, or when service requirements do not permit, at the earliest practicable time. If you are granted reenlistment leave you may take as much as 90 days' leave. You are entitled to take as much as 30 days' advance leave as well as 60 days of earned leave if you have that much carried over from your last enlistment. Reinlistment leave must be taken during one period only.

- ***Sick Leave***—Is authorized absence granted to persons while under medical care and treatment and is considered to be a part of the period of care and treatment. Sick leave is not chargeable as leave.

When you take leave remember that the day you depart on leave, regardless of the hour, counts as a day of duty.

The day of your return counts as a day of leave unless you return before 0900, then the day of return counts as a day of duty.

sports and recreation



HAPPY HOURS, sports, recreational facilities, hobby shops, entertainment programs, enlisted men's clubs and officers' clubs—all of these are an integral part of the Navy way of life. They come under the heading of "recreation and physical fitness" and they are indicative of the Navy's interest in you not only as a fighting man but as an individual.

Good morale and good physical condition are both military factors—so the sports and recreation program benefits not only you—and your dependents—but also the Navy and the entire nation. Here's what goes into the program.

Navy Sports Program

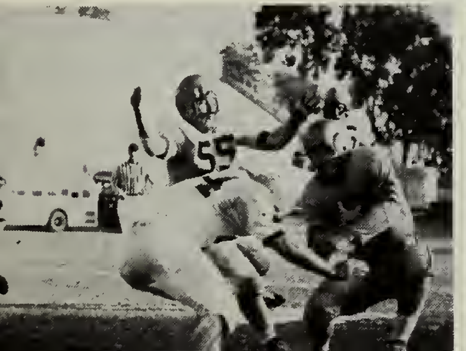
The Navy Sports Program consists of voluntary off-duty participation by you and your shipmates. The program includes organized competitions in the major sports at intramural, intra-district, intra-area, and intra-type levels.

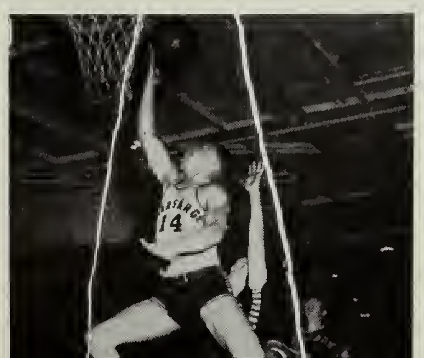
Aboard your ship or station, there are usually intramural leagues in basketball, softball, touch football, volleyball and bowling. And if you're on a shore station, maybe you'll have an opportunity to play such games as squash, handball, badminton and even to learn judo.

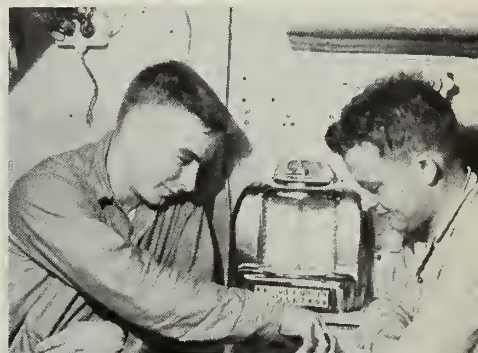
There will be, of course, some men in your outfit who are better-than-average athletes. If you are one of these, you'll want to join the station "varsity" team which will compete in district, area, Fleet and All-Navy competitions. Also, during Olympic years, if you have extraordinary ability you will be given every chance by the Navy to train and participate in the elimination tournaments necessary to qualify as a member of the United States Team. It's pretty rare, but if you are successful, you will be issued authorization orders to travel with the U. S. Olympic team.

"A sport for every man" is the motto of the Navy's sport program. Just because you're not of Olympic caliber in athletic abilities, there is no reason to believe that the Navy has left you out of its sports planning.

Depending on where you're on duty, the Navy offers the following sports at one or more activities: boxing, baseball, football, basketball, golf, swimming, track







and field, hunting, fishing, squash, handball, archery, tennis, badminton, softball, boating, bowling, fencing, gymnastics, soccer, weightlifting, judo, lacrosse, touch football, table tennis, shuffleboard, billiards, volleyball, wrestling and water polo. You won't, of course, find all of them at any one place. The sports program at any one activity is determined by the requests of the men at that activity.

Motion Picture Service

Nightly movies will form a big part of your entertainment, especially if you're serving at sea. The Navy has an organization that is solely concerned with obtaining movies for your ship. The Navy Fleet Motion Picture Service provides 16-mm entertainment motion picture film for exhibition without charge aboard ships and at most stations located outside the continental U. S.

The lists of latest released films are published monthly in ALL HANDS magazine. These movies are available to your ship at Fleet Motion Picture Exchanges.

The motion picture films, distributed under the Fleet Motion Picture Plan, are leased from the motion picture industry and are distributed at no cost to ships and overseas activities. Films leased under this plan are paid for by the BuPers Central Recreation Fund, supplemented by annually appropriated funds.

In addition to the Fleet Motion Picture Service, another program, the Navy-Marine Corps Motion Picture Plan, provides films for your entertainment at certain stations and activities in the continental U. S. and Hawaii. Arrangements for the distribution of this film are made by the respective naval district commandants.

Library Program

Navymen are some of the biggest readers in the U. S. Collectively, you and your shipmates tackle nearly two million new books a year—with subjects ranging from science fiction and natural history to "whodunits" and "how-to do its." The Navy's Library Services is continually trying to fill book requirements for professional and general information, to supplement formal training and for leisure-time use.

Each ship and station has its own library for the Navyman's information, education and recreation. Books for your ship and station libraries are bought through the Library Services Branch of the Bureau of Naval Personnel. This unit selects many new titles each month from advance copies sent out by publishers. Virtually every book published or marketed in the U. S., which seems likely to interest you and your shipmates, is reviewed.

Hobby Craft Program

Are you a "do-it-yourself" man? If you like to build such things as furniture, model ships and aircraft, do leatherwork, or even make repairs on your automobile, the Navy's Hobby Craft Program is for you. Besides the space to work, the hobby shops usually stock the tools to do the job. They are equipped with leatherworking tools, mechanic's tools and even hand and powered woodworking equipment such as band saws, circular saws, sanders, routers and lathes.

At most places, the hobby shop has for sale a reasonable supply of such items as lumber, model kits, leather, lacquer, varnishes, sandpaper and paint brushes at a reduced price. Also, qualified instructors are available to help you in planning your project and help you overcome problems. There are also some guides published to help you. These hobby craft pamphlets can be purchased by your recreation fund. Booklets covering various hobbies can be obtained by writing to the Superintendent of Documents, Government Printing Office, Washington 25, D. C.

Officers' Messes and Enlisted Men's Clubs

Commissioned Officers' Messes, both Open and Closed, have been established to provide lodging, dining, social and recreational facilities for commissioned officers. Chief Petty Officers' Messes, First and Second Class Petty Officers' Messes, as well as other Enlisted Men's Clubs have as their primary mission the job of providing meals, refreshments and recreational facilities for you and your guests. No dues are charged and all these Clubs are open to all active duty personnel of appropriate rates.

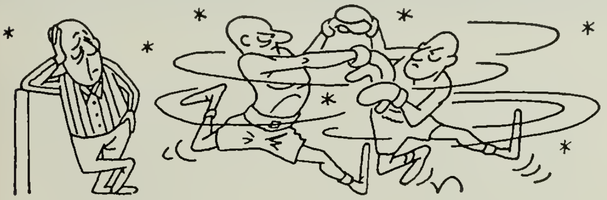
Where Your Recreation Funds Come From

There are several types of funds to pay for your Special Services functions. Although different, each gets almost all of its cash from the same place: Profits made from sales to you and your dependents at Navy Exchanges and ship's stores. Briefly, these funds are:

- ***Unit Recreation Fund***—This is the type fund in which you will probably be most interested, since it is the recreation fund of your ship or station. It finances your ship or station's athletic program, stage shows, movies, all-hands parties, station newspapers, games, your local EM and CPO clubs, and supplements your library facilities. From this fund, too, comes the money to buy flowers for your chapel on Sundays, for the magazines and newspapers in your library.

- ***Composite Recreation Fund***—The Composite Recreation Fund is similar to the Unit Recreation Fund. It serves personnel from several naval activities grouped closely together, where only one set of basic recreation facilities is available.

The administration of this fund, like the Unit Fund, is by the CO of the station where the major source of revenue is located. The CO is aided by the Recreation Council, made up of officers from each participating activity, and the Enlisted Recreation Committee, composed of enlisted representatives of each participating activity.



- ***Command Recreation Fund***—This fund is established and maintained at command level, such as a naval district or river command, air training command, type command or naval force command, for the administration of Unit and Composite Recreation Funds within that command.

The Command Recreation Fund is used for loans or grants for recreational purposes to units and activities within the command, to pay approved obligations.

- ***BuPers Central Recreation Fund***—The Bureau of Naval Personnel Central Recreation Fund is the "big" fund.

It supports the recreation program of the entire Navy by supporting, equalizing and administering the various recreation funds of the Navy.

The Central Recreation Fund consists of a share of the profits of the Navy Exchanges and ship's stores, balances remaining in the recreation funds of decommissioned or disestablished naval activities and gifts or donations accepted by the Navy Department for the recreation of naval personnel.

If your unit has no ship's store or Navy Exchange, your recreation money comes from your type command recreation fund. If the Command Recreation Fund is unable to finance your activity's request, the Command Fund administrator may forward the request to the Chief of Naval Personnel with the recommendation that the money be allocated from the BuPers Central Recreation Fund.

Enlisted Recreation Committee And Recreation Council

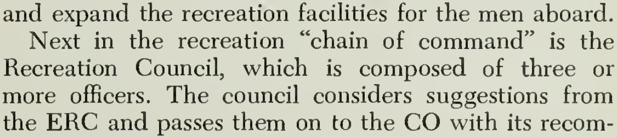
You should know something about the Enlisted Recreation Committee for two reasons: (1) Its members might be able to do you some good; and (2) you may be appointed a member of one some day.

The Enlisted Recreation Committee aboard your ship, or station, like all similar committees, was formed on the authority of Articles 1220, 1224, 1224.1 and 1224.2 of the *Special Services Manual.* All ships and stations have a committee of this sort to help improve and expand the recreation facilities for the men aboard.

Next in the recreation "chain of command" is the Recreation Council, which is composed of three or more officers. The council considers suggestions from the ERC and passes them on to the CO with its recommendations.

The Enlisted Recreation Committee meets once a month, a few days before the meeting of the Recreation Council. In this meeting, the diversion representatives discuss projects in progress and future possibilities, and put their suggestions in writing to the Council.

For example, say your shipmates want to stage a ship's dance. The idea originates in the ERC. The Committee then begins the necessary "leg work" to find out where a dance can be held, the cost of renting a hall, the approximate cost of food, refreshments, etc. It then presents the request, along with a full report on the estimated cost, to the Recreation Council, which then submits its recommendations to the skipper.



The commanding officer, by regulation, is responsible for the expenditures of all funds. Therefore, he endorses his approval or disapproval of this request, as well as all other requests to spend recreation funds.

You may want to request money for equipment, awards for the winners, payment of officials and other expenses to run a league. The necessary money can be

sports and recreation

authorized from the Recreation Fund. 'Rec' money can also be used to sponsor picnics, buy radios and television sets for recreation rooms and magazines.

Another little known function of your Recreation Fund is non-interest-bearing emergency loans to you and your shipmates. If, after investigation, your commanding officer finds that a real emergency exists, he may approve such a loan, provided that the services of the Navy Relief, Red Cross, or other similar relief organizations are not readily available.

Who Can Use Facilities?

The many facilities mentioned above are only as good as your use of them, Your ship or station may have a tremendous hobby shop or well equipped athletic gear locker but they won't be worth the space they take up unless you use them. But in many cases, other personnel are also eligible to use your ship or station's recreational facilities and equipment. The final decision is up to your CO, but here are the people who normally are entitled to use them:

- All active duty military personnel and their dependents.
- Civilian employees of the Department of Defense traveling on official authorization and quartered on the station.
- Civilian employees and their dependents and other civilian personnel associated with the Navy outside the U. S. and Hawaii—when specifically authorized by the Chief of Naval Personnel.
- Civilian employees and their dependents and other civilian personnel associated with the Navy outside the U. S. and Hawaii—when given full Navy Exchange or ship's store privileges.
- Red Cross uniformed personnel and their dependents when assigned to duty within a naval activity.
- Veterans hospitalized in naval hospitals.
- Military personnel of foreign nations when on duty with the U. S. armed forces.
- Guests of military personnel on a limited basis as authorized by your commanding officer.

retirement - plan it, enjoy it

IT'S NOT HARD TO UNDERSTAND why the matter of retirement begins to play a large part in your thinking after you've been in the Navy a few years. This is part of your Navy investment—one of the wisest investments you can make.

You don't have to pay premiums on it (as you do for insurance annuities) and you don't have to wait until you reach a specified age before you can draw retirement pay. You can retire at an age which permits you to accept civilian employment and, often enough, at a highly skilled job for which you have been thoroughly trained by the Navy. Meanwhile, you have the security and confidence afforded by a steady income each month.

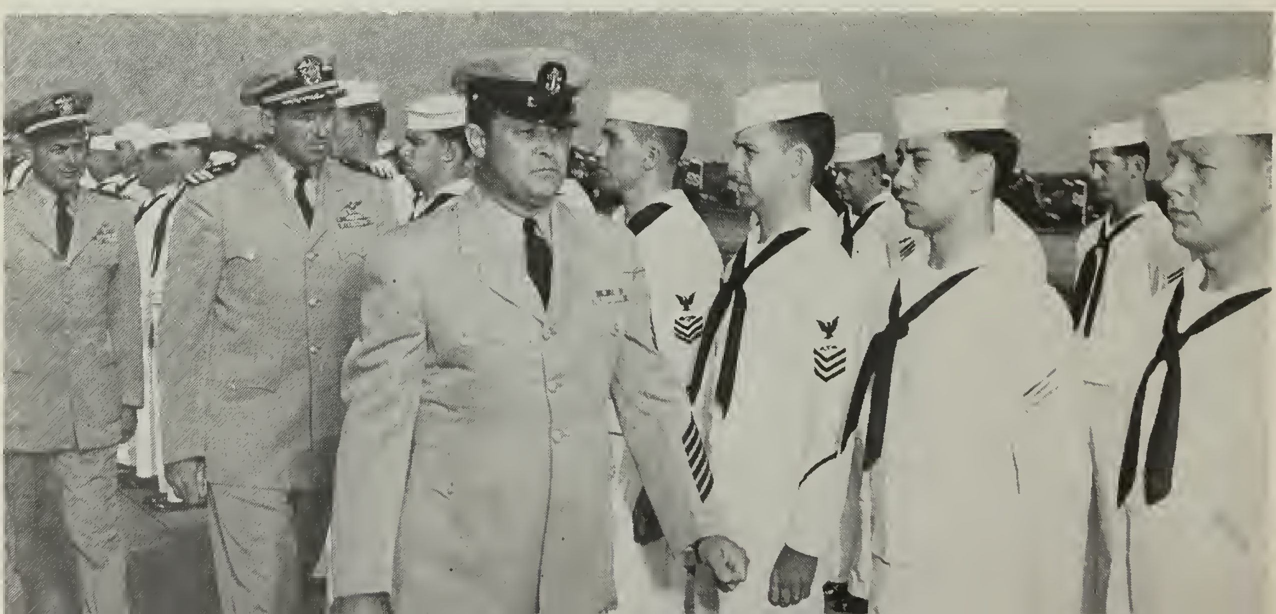
Bear in mind, too, that retirement pay is not the only benefit to be received. Many others are offered. Some are made available through the Navy; others, by the Veterans Administration (remember, you'll be a veteran!) or by federal or state agencies. These are described elsewhere in this issue.

Here is a brief roundup on the various types of retirement and the current administrative procedures and directives concerning persons now being retired from the naval service.

There are two principal routes leading to the non-disability retirement of Regular Navy people. One is for officers, the other for enlisted personnel. (The retirement program for Naval Reservists was discussed in the February 1956 issue of ALL HANDS, page 44). Here they are:

Non-Disability Retirement

- ***Enlisted Personnel***—Any person whose permanent



status is enlisted is eligible for transfer to the Fleet Reserve when certain active duty service requirements have been met. While there are several classes of Fleet Reservists, the great majority of men now on duty will be eligible for transfer only to class F-6, which requires a minimum of 20 years of active duty.

Upon transfer to Fleet Reserve, class F-6, you will be entitled to receive retainer pay computed at the rate of two and one-half per cent of your enlisted basic pay multiplied by the number of years of active federal service. As almost all enlisted personnel with 20 years' service have appointments as chief petty officer, the minimum monthly retainer pay of that pay grade is shown below as indicative of the monthly check you will receive:

Years of Active Service	Retainer and Retired Pay (does not include credit for inactive service)
20	$152.10
21	159.71
22	175.89
23	183.89
24	191.88
25	199.88
26	218.01
27	226.40
28	234.78
29	243.17
30	251.55

For further information concerning transfer to the Fleet Reserve and pay in connection with it, refer to *BuPers Manual*, Chap. 13.

After completing 30 years of combined active duty and inactive service, you are transferred to the Retired List. At that time you are advanced, if appropriate, to the highest rank or grade in which you served satisfactorily. Your pay is then recomputed on the basis of two and one-half per cent of the basic pay of the highest grade or rank so held, multiplied by the number of years of active duty.

If you complete 30 years of active duty you are not eligible for transfer to the Fleet Reserve. Upon your own application, you are placed directly on the Retired List.

- ***Officers***—Non-disability retirement of officers is too complicated for comprehensive coverage in the limited space available here. However, a complete roundup on the subject may be found in the January 1955 ALL HANDS (pages 48-51) and in BuPers Inst. 1811 series.

The table below lists pertinent information for voluntary retirement based on length of service—40 years, 30 years and 20 years—for permanent Regular officers and warrant officers, temporary officers and warrant officers with permanent enlisted status (see the table page 56). Normally, officers with more than 20 but less than 30 years' service may be retired upon their own request, if they meet the following criteria:

- Twice failed of selection for promotion.
- Are within two years of mandatory retirement.

- Are of limited usefulness because of overage in grade or poor health.
- Face personal hardship which retirement would definitely alleviate.
- Find themselves in circumstances which do not fall into any of the above categories, but are clearly not contrary to the best interests of the service.

There are also two types of retirement which are mandatory for permanent officers and warrant officers, both men and women. These are Statutory Age Retirement and Statutory Service Retirement. Full details on these may be found in BuPers Inst. 1811 series.

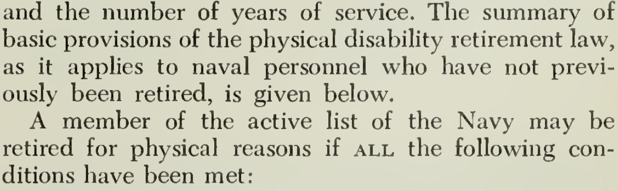
There is no statutory age limit for Regular Navy enlisted personnel. They may serve as long as they are able to perform satisfactorily, and meet the professional and physical requirements of their ratings.

Physical Disability Retirement

The basis for the physical disability retirement of naval personnel is provided for in Chapter 61, Title 10, U. S. Code (formerly Title IV of the Career Compensation Act of 1949). Eligibility for physical retirement is based on a combination of the degree of disability and the number of years of service. The summary of basic provisions of the physical disability retirement law, as it applies to naval personnel who have not previously been retired, is given below.

A member of the active list of the Navy may be retired for physical reasons if ALL the following conditions have been met:

- He has been determined unfit to perform his duties by reason of physical disability incurred while entitled to receive basic pay;
- The disability is not due to intentional misconduct or willful neglect, and the disability was not incurred during a period of unauthorized absence;



- The disability is 30 per cent or more disabling. If it is less than 30 per cent he is not entitled to any disability retirement pay but he may be separated for physical disability with severance pay computed in an amount equal to two months' basic pay of the appropriate rank, grade, or rating for each year of service, not to exceed two years' basic pay. One exception: A member with 20 or more years of active service, and whose disability is less than 30 per cent, will be retired;

- The disability was the proximate result of the performance of active duty. In this connection, any disability shown to have been incurred in the line of duty during a period of active service in time of war or national emergency will be considered valid;
- He has completed at least eight years of active service. If this condition is fulfilled, the requirement that disability be the proximate result of active duty need not be met. If he has completed less than eight years of active service, and his disability is not the result of active service, he may be separated and receive severance pay whether or not he is 30 per cent or more disabled;
- If accepted medical principles indicate the disability *is* of a permanent nature, he will be permanently retired. If accepted medical principles indicate the disability *may* be of a permanent nature, he will be transferred to the temporary disability retired list. If retired either permanently or temporarily for physical reasons, he is entitled to receive disability retirement pay computed either by multiplying his basic pay by:

1. The number of years of active service multiplied by two and one-half per cent; or
2. The percentage of physical disability as of the time his name is placed on the list.

While on the temporary disability retired list, you will receive at least 50 per cent of your basic pay.

If you are permanently retired without first having been placed on the temporary disability retired list—and if permanently retired from the temporary retired list—you are entitled to receive disability retirement pay computed as above, except that if the second option is used, the percentage of disability will be determined as of the date you are permanently retired.

If you have satisfactorily held a temporary rank or rate higher than that in which serving at the time of your placement on the temporary disability retired list—or at the time of your permanent retirement—your disability retirement pay will be based on the basic pay of the higher rank or rate provided it is determined by the Secretary of the Navy that such service was satisfactory.

If the physical disability entitling you to disability retirement pay is found to exist as a result of a physical examination given in connection with effecting a permanent promotion (or a temporary promotion where eligibility for it was based on cumulative years of service, or years of service in rank), your retirement pay will be based upon the basic pay of the rank to which you would have been promoted. In no case will disability retirement pay exceed 75 per cent of your basic pay.

If you are placed on the temporary disability retired list, you will be given periodic physical examinations to determine whether your disability has changed. If

Retirement Program for Commissioned and Warrant Officers

Type of Retirement	Applicable to	Creditable Service	Pay	Rank on Retired List
40 Years' Service	Permanent Officers	Full time active duty in Regular or Reserve component of Armed Forces	Three-fourths of applicable basic pay of rank in which retired	Rank at time of retirement (unless entitled to higher rank under some other provision of law).
30 Years' Service (1)	Permanent Officers	Same as above	Same as above	Same as above
30 Years' Service (2)	Temp. or any Off. & WOs with Permanent Enlisted Status	Same as above, less time lost for AWOL, SKMC or NPDI	Same as above	Rank at time of retirement (unless entitled to higher rank under some other provision of law).
20 Years' Service (1)	Permanent Officers and officers whose permanent status is enlisted	Active duty in the Navy, MarCorps, Army, Air Force, CG or Reserve component thereof, including active duty for training, at least 10 years of which is commissioned	2½ times years creditable for basic pay times applicable basic pay of retired rank. Maximum: 75%	Rank at time of retirement (unless entitled to higher rank under some other provision of law).
20 Years' Service (2)	Warrant Officers	Full-time active duty, commissioned, warrant or enlisted in Armed Forces or Reserve components	Same as above	WO grade in which serving at time of retirement, unless entitled to higher rank or pay under other law, subject to member's selection.

as a result of such an examination—or at the end of a period of five years from the date of being placed on the temporary list—it is determined that the disability is permanent and 30 per cent or more disabling, you will be permanently retired. (Minimum 30 per cent not required if you have 20 years' active service.)

If, as a result of this physical exam, you are found to be physically fit, you may (subject to your consent) be called to active duty and be reappointed or reenlisted. Should you be found physically fit, but do not give your consent to reappointment or reenlistment, your status on the temporary disability retired list—and your disability retirement pay—will come to an end.

If, as a result of this exam, you are found physically disqualified, but the percentage of disability has reduced to below 30 per cent you will be discharged from the temporary disability retired list, with severance pay, unless you have completed 20 years' service.

That's the basic story so far as retirement eligibility is concerned.

Retirement Benefits

Here is a brief summary of the privileges and obligations of retired members of the Regular Navy. In addition, "rights and benefits" offered by veterans' legislation and administered by the Veterans Administration and other federal and state government agencies are discussed on the following pages.

- **Orders to active duty**—Retired officers and enlisted men are not required to hold themselves in readiness for active service although they may, at the discretion of SecNav, be ordered to active duty in time of war or national emergency. In time of peace they may not be ordered to active duty without their consent.
- **Military Law**—Members retired with pay continue to be subject to the Uniform Code of Military Justice.
- **Uniform**—Retired personnel are entitled to wear the prescribed uniform of the rank or rate held on the retired list when the wearing is appropriate. They are prohibited from wearing the uniform in connection with non-military, personal or civilian enterprises, or activities of civilian nature. Retired personnel in a foreign country may not wear the uniform except when attending, by formal invitation, ceremonies or social functions at which the wearing of the uniform is required by the terms of the invitation, or by the regulations or customs of the country.
- **Use of Titles**—Retired persons are permitted to use their military titles in connection with commercial enterprises.
- **Commissary, Ship's Stores and Officers' Messes**—Navymen *retired with pay* may be accorded the privileges of armed forces commissary stores and Exchanges as well as Navy clothing and small stores and ship's stores. Privileges of Commissioned Officers' Messes Open are available to officers retired with pay, subject to the limitation of facilities.
- **Hospitalization**—Members of the naval service receiving retired pay including Naval Reservists who have eight years active duty and who are receiving retired pay, may be hospitalized in naval and uniformed services medical facilities for most ailments except blindness, neuropsychiatric disorders, tuberculosis and other chronic disorders. Members with these conditions must obtain hospitalization from the VA if hospitalization at government expense is desired.

Retired members entitled to hospital care are also eligible for dental care, subject to the availability of dental facilities. They, and their dependents, are also entitled to outpatient treatment.

veterans' benefits

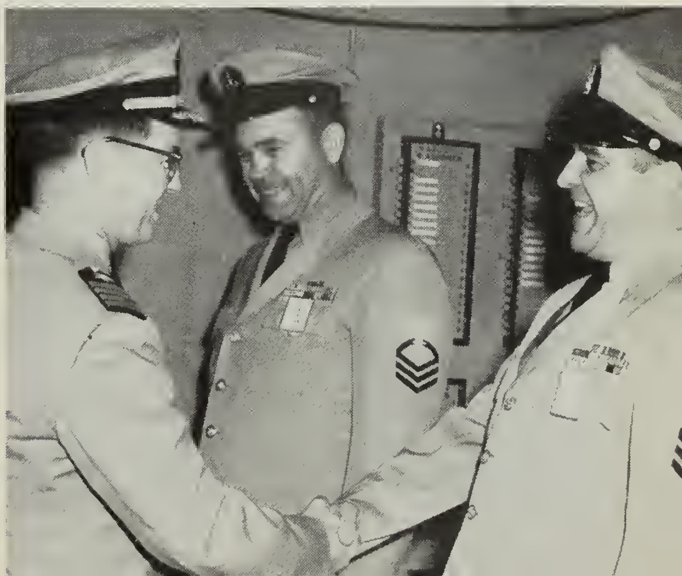
Many Navymen (both active duty and retired) frequently overlook the fact that they may have acquired a veteran's status and therefore are entitled to the many benefits available to veterans. Some assume that the receipt of retired pay (or active duty pay) is in itself a bar to most veterans benefits, or at least to the financial compensations which accompany veterans benefits. Some VA benefits accrue to survivors of veterans, and in most cases survivors of active duty and retired Navymen may be eligible. Other VA benefits (for example, homestead rights) may not be taken advantage of until the Navyman retires from active duty. Still other benefits have deadlines. Actually, the VA does not consider retired or retainer pay as "income" and such pay is not taken into consideration in establishing eligibility for, or in computing the extent of, veterans benefits.

Navymen no longer in active service should remember that other federal and state legislation is still in effect providing additional rights and benefits to veterans of World Wars I and II. There are also some such benefits for peacetime service.

Here is a summary of the major benefits available:

- **Employment**—You are entitled to use the specialized counseling and placement services provided for all veterans by federal and state law. When you retire you may register with the appropriate state or local employment office, or you may contact the veterans' employment representative assigned to your locality.

Non-disabled war veterans are entitled to a five-point preference in addition to their earned ratings in



Civil Service examinations. Disabled veterans are entitled to 10 points. Certain widows and certain mothers also may be granted veteran's preference.

- ***Federal employment and dual compensation***—With certain exceptions, retired officers who receive retired pay (except retired officers of the Naval Reserve) are prohibited from holding a *civilian position or office with the federal government* where either the retired pay *or* compensation amounts to $2500 annually, unless (1) they are elected to the position, (2) appointed by the President with the advice and consent of the Senate, or (3) retired for injuries received in battle or for injury or incapacity incurred in line of duty.

The total income (retired pay plus civilian compensation) of those retired officers who are eligible for and accept employment in a federal civilian position, is limited to $10,000 annually unless they were retired for disability incurred in combat with an enemy or caused by an instrumentality of war.

The dual compensation and dual employment laws are not applicable to retired enlisted members.

- ***Home and Farm Loans***—The loan benefits under both the WW II and Korean G. I. Bills are identical since loan guaranty authorized for Korean veterans is simply an extension of the one provided for veterans of World War II. The VA may guarantee loans used to (1) buy, build, or improve a home, (2) buy a farm or farm supplies and equipment, (3) buy a business or otherwise enable the undertaking of a legitimate business venture. Under certain conditions loans may also be guaranteed to liquidate delinquent indebtedness incurred in connection with the above.

The VA itself does not lend money where community resources provide four and one-half per cent financing. You must make your own arrangements for financing through usual channels, such as banks, building and loan associations, public and private lending agencies or individuals.

In order to obtain a VA guaranteed or insured loan the arrangement with the lender must be such that the loan will be fully repaid within (1) 10 years, if a non-real estate loan, (2) 30 years, if a home loan, (3) 40 years if a farm real estate loan, and (4) five years, if an unamortized loan. (For home loans see page 15.)

The matter of loans and guaranties is highly technical and *you should consult VA before making any commitments based upon the assumption that you have any entitlement under the Korean G. I. Bill.*

- ***Unemployment Compensation***—In most cases eligibility for WW II readjustment allowances expired 24 July 1952. Retired persons and other veterans now being separated are eligible for the special unemployment compensation benefits provided for under the Korean G. I. Bill. However to be eligible for payments, veterans must comply with the requirements of the state unemployment compensation law.

The unemployment compensation benefit to eligible veterans is $26 per week of unemployment (not to exceed 26 weeks) after their discharge. The cut-off date for unemployment compensation under the Korean G. I. Bill is 31 Jan 1960.

- ***Education and Training***—Training under the World War II G. I. Bill has expired. The Korean G. I. Bill offers similar but more limited benefits which are, however, paid directly to the individual rather than to the educational institution. The Korean G. I. Bill specifies the following deadline requirements: an enlisted man must start this education within three years after his discharge from an enlistment in which he was serving on 31 Jan 1955; an officer, within three years after the end of a period of service entered into before 31 Jan 1955. Recent changes to the G. I. Bill permit accrual of entitlement to continue for the remaining portion of an enlistment entered into on or before 31 Jan 1955, and also extends deadline for completion of education to 31 Jan 1965 or eight years after discharge or release, whichever comes first.

- ***Vocational Rehabilitation***—Any Navyman retired for disability who is in need of vocational rehabilitation because of the handicap of a service-connected disability may apply to the VA for training.

Disability must have been incurred in, or aggravated by, service in World War II (before 25 Jul 1947), or during the Korean conflict. Training must be completed by 31 Jan 1964.

- ***Homestead preference***—Veterans must have an honorable discharge and at least 90 days' war service. Information concerning public lands available both in the U. S. and Alaska may be obtained from any Federal Land Regional Office or the Bureau of Land Management, Department of the Interior, Washington 25, D. C.

- ***U. S. Naval Home***—A retired Navyman who is old and infirm may be admitted by the Secretary of the Navy to the U. S. Naval Home, Philadelphia, Pa., for domiciliary care. Relinquishment of retired pay is not a requirement for admission.

- ***Burial rights***—Burial in national cemeteries may be authorized for both the retired Navyman and his wife and minor children (see page 76).

- ***Benefits for Veterans with Disabilities***—There are many additional benefits for veterans who have service-incurred or non-service-incurred disabilities resulting from injuries, illness, etc. These vary according to the specific case, and include *medical and domiciliary benefits, medical examinations and treatment, prosthetic appliances, vocational rehabilitation, cars for disabled veterans, wheel chair homes,* and in some cases *disability compensation* and *pension.* For further information contact the nearest VA branch office.

annuity plan - for your family

WHAT'S GOING TO HAPPEN to my family in case something happens to me? Will my wife and youngsters have sufficient means of support? The thinking Navyman nearing retirement considers these questions and knows that to a large extent his planning will determine the amount of security which his family may depend upon.

If a Navyman dies while *on active duty,* his dependents will receive the six months' death gratuity and will generally be entitled to VA compensation; in addition they will in most cases be eligible for certain Social Security benefits, and if the Navyman has reinstated his USGLI or NSLI (or has a sufficient amount of civilian insurance in effect), then he can feel that his family is reasonably well fixed.

But if a Navyman dies *after* retirement, the future of his family will depend to a much larger degree on what he has done for them. They may count on, in most cases, certain Social Security benefits, and IF he had a service-connected disability they might be eligible for VA pension or compensation. But beyond this, it rests with him.

How the Annuity Plan Works

But there is one sure way of providing for your dependents after your retirement—the Uniformed Services Contingency Option Act (Public Law 239, 83rd Congress). This act sets up a plan under which you draw a little *less retired pay* during your lifetime—but your surviving *dependents continue to receive a monthly check* after your death. Depending upon the options you select, you can assure your wife of a percentage of your retired pay for the remainder of her life or until she remarries, or a steady income for your children until they become 18 or marry.

The annuity plan is non-profit, and in the average case the total amount collected by you and your survivors will be greater than the amount you alone would have received if you had not elected to participate. Yet, the total cost to the government, worked on an "actuarial basis" is approximately the same.

Here's how the plan works. You will automatically be forwarded a copy of NavPers Form 591 some time after you reach your 17th year of service for pay purposes. (Briefly this includes practically all time, active and inactive, served in Regular or Reserve components of such "uniformed services" as the Army, Navy, Air Force, Marine Corps, Coast Guard, Public Health Service, Coast and Geodetic Survey, federally-recognized National Guard units, the Philippine Constabulary and Philippine Scouts.) On this Form 591 you may apply for the annuity, stating the options you desire; or, if you prefer, you may state that you do not wish to participate in the plan. In either event, you'll be told at that time what to do to implement your choice.

If you do want the annuity, *you must execute the required options* BEFORE *you complete 18 years of service* or you will be ineligible for the plan; but executing the required option, even though you have no dependents at the time, will do no harm. Deductions are not made until you actually retire, and if you have not acquired dependents by that time, no deductions will be made from your retired pay. *The plan also contains provisions for modifying or revoking your option while you are still on active duty.* Once you have retired, however, you are committed and cannot withdraw from the plan. Only in the case of a Navyman placed on the temporary disability retired list, and later returned to active duty, will a participant be allowed to withdraw.

The plan allows you to select one or a combination of the four basic options and designate whether your dependents will receive one-eighth, one-fourth or one-half of your reduced retired pay. Here are the basic options:

1. *Annuity for your widow*—payable to, or on behalf of, the widow, until her death or remarriage.
2. *Annuity for a child or children*—payable to, or on behalf of, surviving child or children, terminating when there ceases to be at least one surviving child unmarried and under 18 years of age. Where there is a child unmarried and over 18 who is incapable of self-support because of mental or physical defects, the annuity would terminate upon marriage of such a child, or upon his death or recovery.
3. *Annuity for both*—payable to, or in behalf of, the widow and surviving children. Terminates upon death or remarriage of the widow, or if later, on the first day of the month in which there were no surviving children under 18 and unmarried. If there is a mentally defective or physically incapacitated child

annuity plan - for your family

unmarried and over 18, the annuity would terminate upon his marriage, recovery or death.

4. *Option to cover the contingency of the beneficiary's dying before the retired member*—this may include the terms of either Options 1, 2 or 3 (or a combination of Option 1 and 2) with the added provision that no further deductions will be made in the retired member's pay should his beneficiary (or beneficiaries) precede him in death.

Yet another choice is provided by the law—you may elect any combination of the options providing benefits to your widow only, and one providing benefits to your children only, subject to the condition that the total amount of the benefits cannot exceed one half of your own reduced retired pay.

Here are two examples of how the plan works. Suppose a CPO, age 42, retires for reasons other than disability, after he has completed over 22 years' service. He has a gross retainer pay of $175.89 per month (that is, before deductions for such items as income tax and insurance). To provide some future security for his wife (aged 39 at the time of the chief's retirement), he has selected Options 1 and 4, while electing to give her one-half of his "reduced retainer pay" (his gross pay, minus the cost of participation in the plan). The "reduction factor" (which may be found aboard your own ship in NavPers 15867, *"Percentage Cost Tables for Selection of Options Under the Uniformed Services Contingency Option Act of 1953"*), multiplied by the CPO's gross retainer pay, produces the amount which will be withheld from the chief's monthly retainer pay—in this case $15.75 per month.

The chief thus receives a "reduced retainer pay" of $160.14 per month during the remainder of his lifetime; on his death, the widow (if she does not remarry) will receive $80.07 per month until she dies.

A captain who completes 30 years and accepts nondisability retirement at age 53 serves as an example of how officers fare under the annuity plan. The captain, whose wife is 51 years old, has selected Option 1 only, with a one-half annuity. His gross retired pay is $608.40. Using the same method of computation as that used for the CPO, we find the captain's retired pay is reduced by $70.94 per month, leaving him with a monthly pay of $537.46 (before taxes, etc.). Then, when he dies his wife will receive $268.73 per month until she dies or remarries.

Finally, here is how the plan affects Navymen in different categories:

- Regular Navymen with *less* than 18 years' service for pay purposes have until the completion of their 18 years to decide whether to take advantage of the annuity plan.
- Reservists, active or inactive, who have not finished 18 years' service for pay purposes are under the same provisions as the Regular Navyman in the same circumstances.

There are only two administrative exceptions to the 18-year service rule:

1. The man who retires as the result of a physical disability before completing 18 years' service can decide what to do at the time he retires.
2. The man whose eligibility for making an election expires while he is in a status which prevents his making such an election (such as missing, prisoner of war, etc.) has six months after his return to the jurisdiction of his service to decide what to do.

saving in the navy

Navy Savings Deposit Program

IN TODAY'S WORLD of painless dentistry, tranquilizers and easy payment plans, it's surprising that no one has come up with an absolutely painless method of saving money. The Navy, however, offers you two savings plans which are just about as easy to take as any method of holding on to a part of your monthly pay—Savings Deposits and U. S. Savings Bonds.

Participation in either of these plans enables you to invest your spare dollars at a good rate of interest, yet the money is readily available if you need it.

The Navy Savings Deposit program, open to all enlisted men and women in the Navy and Marine Corps (except those Reserves on active duty for less than six months), was specifically authorized by Congress in 1899 to help enlisted personnel save money. Funds deposited in this "Navy Bank" for periods of six months or more will earn interest at the rate of *four per cent* yearly, based on a year of 360 days. The interest will be computed at the time of repayment of the deposit.

Recent changes in the Savings Deposit program have made this method of stashing away cash even more attractive. You can now make deposits in your Navy savings account by requesting in writing that your pay record be checked each month. Under this system, your request will specify the amount to be deposited each month and the number of months the deposits are to be made, or that the deposits are to be made indefinitely. You may also make cash deposits to the disbursing officer. In either case, the amount deposited will be entered on your deposit record book (S&A Form 47, Revised).

You may make *one deposit each month* in full dollar amounts of not less than five dollars. Details of certain limitations on the amount of money which may be deposited at any one time may be obtained from your disbursing officer.

The money in your Navy Savings Deposit and accumulated interest may be withdrawn at time of release to inactive duty or discharge, or in case of an emergency, upon approval of your commanding officer.

Savings Bonds

An equally easy—and profitable—method of holding on to part of your earnings is the purchase of U. S. Savings Bonds. Buying bonds in any denomination is a simple matter: Just go by your disbursing office and complete a Savings Bond Allotment Request (S&A Form 545) for the amount you want to save each month or each quarter.

Under the "bond-a-month" plan you may allot $18.75 for a $25-bond, $37.50 for a $50-bond, or $75 for a $100 bond. A "bond-a-quarter" plan permits the alloting of $6.25 a month for purchase of a $25-bond every three months or $12.50 a month for a $50-bond each quarter, $25 per month for a $100-bond or $50 for a $200-bond. Larger bonds may also be purchased. The bonds thus bought will be delivered at government risk or (if you prefer) they will be held for safekeeping until you desire delivery.

Navymen who have already taken advantage of this automatic, systematic way to keep a part of their pay have discovered how rapidly a small amount of money saved regularly each month accumulates into substantial savings and purchasing power. The minimum Savings Bond allotment of only $6.25 a month will accumulate a $100 denomination Savings Bond in one year. The investors who allot $18.75 each month save more than $225 in one year. A substantial nest egg of safe savings always available for quick cash when needed is easy to build with a bond allotment.

Maximum advantage of bond ownership is gained when each bond is held to maturity. In eight years and ten months it repays four dollars for every three invested at the rate of 3¼ percent interest compounded semiannually. Recent improvement in E Bonds makes them more attractive for both long term and short term personal savings.

social security benefits

When it comes to retirement and survivors benefits, career Navymen and their dependents are offered "double protection."

This double protection comes in the form of Social Security which gives you old age disability and survivor benefits in addition to your military retirement pay and increased "dependency and indemnity compensation" described on pages 74 and 75.

Since you and your dependents have been entited to this double protection only since 1 Jan 1957, you probably are not aware of the many potential benefits that Social Security offers. Therefore, here's a brief rundown of what Social Security is and what you and your family get in return for the money you put into it.

What Is Social Security?

Putting it in simple terms, Social Security means insurance. It's a government-sponsored old-age and survivors insurance program which provides protection to nine out of every 10 employed civilians in this country —and their families—as well as giving you, as a career Navyman, added old-age and survivor benefits.

Social Security provides you with monthly income, in addition to your military retirement pay and your survivor benefits payable by the VA, for:

You upon reaching age 65

Your wife, in the event you die and are survived by children under 18 years of age

You at age 50, if you're disabled

Your wife or widow upon reaching age 62

Your orphaned children if they are under 18 years of age

Your dependent parents.

That's a brief rundown of the way you benefit under Social Security. The amount of the monthly payments depends upon (1) the amount of your basic pay each month, and (2) the number of Social Security credits you have established. Before taking a deeper look into these benefits, let's see how you establish Social Security wage credits in order to become eligible for them.

Your Social Security Credits

As a Navyman you have been receiving free Social Security wage credits of $160 per month, regardless of the actual amount of your basic pay, for each month you served on active duty between 16 Sept 1940 and 31 Dec 1956.

Although you received these gratuitous wage credits, they were of little value to you if you were a career

Navyman entitled to Navy retirement. That's because the law prohibited you from drawing both Social Security old age benefits and Navy retirement pay for the same period of service. This situation has changed, however, through recent legislation. As a result, *all military personnel now on active duty are under Social Security on a full participating basis and get full benefits instead of the limited gratuitous credit and reduced benefits they received in the past.*

- ***Gratuitous Credits***—Provided you were on active duty on or after 1 Jan 1957, any gratuitous Social Security credit you received for service between 1 Jan 1951 and 31 Dec 1956 can now be counted for Social Security old age benefits. This entitles you to draw both Social Security old age benefits and military retirement pay for active duty since 1 Jan 1951.

- ***Credits Under New Law***—Since 1 Jan 1957, when you were placed under Social Security on a full participating basis, the $160 gratuitous credits you formerly received have been discontinued and you have had Social Security taxes withheld from your pay each month. You are taxed a small amount (2¼ per cent of your basic pay) each month in order to help pay for the added old age and survivor benefits you and your family now receive. The total cost for these added Social Security benefits amounts to 4½ percent of your basic pay. You pay only half of this amount, while the government pays the balance.

How You Get Complete Coverage

In order to qualify for complete coverage under the Old Age and Survivors Insurance (OASI) program, you must work certain periods during which you contribute (that is, pay Social Security tax). The amount of time you must work is measured in "Quarters of coverage." Quarters of coverage are credited in different manners depending upon your employment status and the amount of your basic pay. A quarter of coverage, in a general way, corresponds with a calendar quarter of work. A calendar quarter is a three-month period beginning 1 January, 1 April, 1 July and 1 October each year.

Social Security tax is automatically withheld from your pay each month through payroll deductions. You're taxed a flat rate of 2¼ per cent of the first $4200 of your basic pay each year. The most you will be required to pay each year is $94.50 and that is only if you earn $4200 or more base pay. Allowances, incentives and special pay are not taxable for Social Security purposes.

In the event your basic pay is $4200, the monthly tax deducted from your pay throughout the year will be $7.88 or less. However, many warrant officers and officers in pay grade 0-3 (LT) and above, whose basic pay is more than $4200 will be taxed monthly during the year at the rate of 2¼ per cent only until the total of $94.50 is paid.

By studying the following chart you can determine just how much Social Security tax will be deducted from your pay each month. If you take a close look

SOCIAL SECURITY TAX DEDUCTION RATES

(per Month)

PAY GRADE	Under 2 Yrs.	Over 2 Yrs.	Over 3 Yrs.	Over 4 Yrs.	Over 6 Yrs.	Over 8 Yrs.	Over 10 Yrs.	Over 12 Yrs.	Over 14 Yrs.	Over 16 Yrs.	Over 18 Yrs.	Over 22 Yrs.	Over 26 Yrs.	Over 30 Yrs.
0-8 Admiral	$26.17	$26.17	$27.49	$27.49	$27.49	$27.49	$27.49	$27.49	$27.49	$27.49	$27.49	$27.49	$27.49	$28.72
0-8 Vice Adm.	23.92	23.92	25.24	25.24	25.24	25.24	25.24	25.24	25.24	25.24	25.24	25.24	25.24	26.47
0-8 Rear Adm. (Up.-Hlf.)	21.67	21.67	22.99	22.99	22.99	22.99	22.99	22.99	22.99	22.99	22.99	22.99	22.99	24.22
0-7 Rear Adm. (Low. Hlf.)	18.01	18.01	19.13	19.13	19.13	19.13	19.13	19.13	19.13	19.13	19.13	19.13	20.36	21.76
0-6 Captain	13.34	13.34	14.22	14.22	14.22	14.22	14.22	14.22	14.22	14.74	16.15	16.85	17.55	18.25
0-5 Commander	10.67	10.67	11.41	11.41	11.41	11.41	11.41	11.93	12.64	12.99	13.69	14.39	15.09	15.09
0-4 Lt. Commander	9.00	9.00	9.65	9.65	9.65	10.18	10.88	11.23	11.58	11.93	12.64	12.99	13.34	13.34
0-3 Lieutenant	7.34	7.34	7.90	8.42	9.13	9.48	9.83	10.18	10.53	10.88	11.23	11.58	11.58	11.58
0-2 Lt. (jr. gr.)	5.84	6.17	7.55	7.55	7.90	8.25	8.60	8.95	9.30	9.30	9.30	9.30	9.30	9.30
0-1 Ensign	5.00	5.34	6.67	6.67	7.02	7.37	7.72	8.07	8.42	8.42	8.42	8.42	8.42	8.42
W-4 (Chief W. Off.)	$ 7.49	$ 7.99	....	$ 7.99	$ 8.34	$ 8.69	$ 9.04	$ 9.48	$10.18	$10.53	$10.88	$11.23	$11.58	$11.93
W-3 (Chief W. Off.)	6.81	7.28	....	7.28	7.46	7.63	7.81	8.07	8.42	8.60	9.13	9.63	9.98	10.33
W-2 (Chief W. Off.)	5.96	6.32	....	6.32	6.49	6.84	7.20	7.55	7.88	8.05	8.40	8.75	9.10	9.45
W-1 (W. Off.)	4.94	5.65	....	5.65	6.00	6.44	6.62	6.88	7.06	7.23	7.58	7.93	8.28	8.28
E-7 CPO	$ 4.64	$ 5.00	....	$ 5.18	$ 5.35	$ 5.70	$ 5.88	$ 6.14	$ 6.32	$ 6.49	$ 6.84	$ 7.20	$ 7.55	$ 7.55
E-6 PO1	3.96	4.21	....	4.39	4.83	5.00	5.27	5.44	5.62	5.79	6.14	6.49	6.49	6.49
E-5 PO2	3.27	3.69	....	4.12	4.30	4.56	4.74	4.91	5.09	5.27	5.44	5.79	5.79	5.79
E-4 PO3	2.75	3.16	....	3.60	3.77	4.04	4.21	4.39	4.56	4.74	4.91	4.91	4.91	4.91
E-3 SN, etc	2.24	2.63	....	2.98	3.16	3.33	3.51	3.60	3.69	3.69	3.69	3.69	3.69	3.69
E-2 SA, etc	1.93	2.28	....	2.46	2.63	2.81	2.98	2.98	2.98	2.98	2.98	2.98	2.98	2.98
E-1 SR, etc	1.87	2.22	....	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40
E-1 (under 4 months)	1.76	....	....	....	....	....	....	....	....	....	....	....	......	....

Monthly Rates of Old Age and Survivors' Benefits

If Your Average Monthly Earnings Were:	At Age 65 You Would Receive	Your Wife's Benefits Would Be				Your Widow At Age 62 Would Receive	Your Widow With One Child Under 18 Years of Age Would Receive	Your Widow And Two Children Under 18 Years of Age Would Receive	One Dependent Parent Would Receive	Lump-Sum Death Payment
		Age 62	Age 63	Age 64	Age 65					
$ 45	$ 30.00	$11.30	$12.50	$13.80	$15.00	$30.00	$ 45.00	$ 50.20	$30.00	$ 90.00
80	45.00	16.90	18.10	20.60	22.50	33.80	67.60	67.50	33.80	135.00
90	49.50	18.60	20.70	22.70	24.75	37.10	74.30	74.30	37.10	148.50
100	55.00	20.70	23.00	25.30	27.50	41.30	82.50	82.50	41.30	165.00
110	60.50	22.70	25.60	27.80	30.25	45.40	90.80	90.80	45.40	181.50
120	62.50	23.50	26.10	28.70	31.25	46.90	93.80	96.00	46.90	187.50
130	64.50	24.30	27.00	29.70	32.30	48.40	96.80	104.00	48.40	193.50
140	66.50	25.00	27.80	30.60	33.30	49.90	99.80	112.00	49.90	199.50
150	68.50	25.80	28.60	31.50	34.30	51.40	102.80	120.00	51.40	205.50
160	70.50	26.50	29.50	32.40	35.30	52.90	105.80	128.00	52.90	211.50
170	72.50	27.30	30.30	33.30	36.30	54.40	108.80	136.00	54.40	217.50
180	74.50	28.00	31.10	34.20	37.30	55.90	111.80	144.00	55.90	223.50
190	76.50	28.80	32.00	35.20	38.30	57.40	114.80	152.00	57.40	229.50
200	78.50	29.50	32.80	36.10	39.30	58.90	117.80	157.00	58.90	235.50
210	80.50	30.30	33.60	37.00	40.30	60.40	120.80	161.00	60.40	241.50
220	82.50	31.00	34.50	37.90	41.30	61.90	123.80	165.00	61.90	247.50
230	84.50	31.80	35.30	38.80	42.30	63.40	126.80	169.00	63.40	253.50
240	86.50	32.50	36.10	39.70	43.30	64.90	129.80	173.00	64.90	255.00
250	88.50	33.30	37.00	40.70	44.30	66.40	132.80	177.00	66.40	255.00
260	90.50	34.00	37.80	41.60	45.30	67.90	135.80	181.00	67.90	255.00
270	92.50	34.80	38.60	42.50	46.30	69.40	138.80	185.00	69.40	255.00
280	94.50	35.50	39.50	43.40	47.30	70.90	141.80	189.00	70.90	255.00
290	96.50	36.30	40.30	44.30	48.30	72.40	144.80	193.00	72.40	255.00
300	98.50	37.00	41.10	45.20	49.30	73.90	147.80	197.00	73.90	255.00
310	100.50	37.80	42.00	46.20	50.30	75.40	150.80	200.00	75.40	255.00
320	102.50	38.50	42.80	47.10	51.30	76.90	153.80	200.00	76.90	255.00
330	104.50	39.30	43.60	48.00	52.30	78.40	156.80	200.00	78.40	255.00
340	106.50	40.00	44.50	48.90	53.30	79.90	159.80	200.00	79.90	255.00
350	108.50	40.80	45.30	49.80	54.30	81.40	162.80	200.00	81.40	255.00

you will notice that the monthly Social Security tax withheld from a seaman apprentice (E-2) with less than two years' service would be $1.93; a chief petty officer (E-7) with over 12 years' service would be $6.14; an ensign (0-1) with less than two years' service would be $5.00; while an admiral (0-8) with over 28 years' service would be $27.49 for the first three months and the balance of $12.03 during the fourth month, which would bring his total payments to $94.50, the maximum you can be taxed in a one year period.

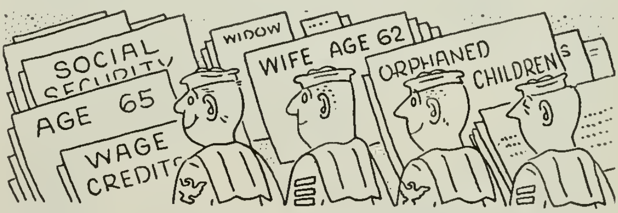
There are no provisions of current laws which permit the waiver of these payments, therefore, if you're already fully insured under Social Security, or do not desire to participate, you will still be required to contribute. If you are receiving pay from other employment covered by Social Security, in addition to your military pay, you will still be required to pay Social Security tax on both earnings. In such cases, however, you will be refunded for any amounts paid in excess of $94.50 or you may have the amount of your overpayment applied to Federal Income Tax payments.

Now that you know what Social Security is and how much it costs you, let's look into the details concerning the benefits available.

Retirement Benefits

Upon reaching age 65, if you are eligible, you may receive a lifetime monthly retirement benefit. In the case of your wife, she may also draw lifetime monthly benefits, at age 62 or 65, provided you have reached age 65 and are also drawing Social Security retirement benefits.

The amount of your OASI retirement benefits would be determined by your "average monthly wage," during the years you were covered under the Social Security law. The exact amount of these benefits is different in almost every case and must be worked out according to the individual circumstances.



The amount of your monthly old-age retirement benefits determines the amount payable to your wife and dependent children or parents. Payment to your dependents is figured in accordance with the following scale:

The monthly payment to your:	Equals this part of your monthly benefits—
Wife	One-half (½)
Child under 18 (when you have reached age 65)	One-half (½)
Widow	Three-fourths (¾)
Child under 18 (after your death)	One-half (½) for each child with an additional one-fourth (¼) of the amount of your payment being divided equally among the children.
Dependent widower	Three-fourths (¾)
Dependent parent	Three-fourths (¾)

The total monthly payment you and your family may receive cannot be more than 80 per cent of your average earnings or more than $200 each month. If family payments would be more than either of these amounts, each dependent's payment would be reduced to bring the total down to the maximum amount payable. Application of the 80 per cent maximum, however, cannot reduce the family benefits below $50 or one and one-half times the worker's benefits amount, whichever is the larger figure.

The exact amount of your monthly benefits, as well as those for your wife and dependents can be determined only after you have applied for your old age benefits. However, the chart on page 63 will give you an idea of the approximate amount you and your dependents would receive.

Old Age Benefit to You and Dependents

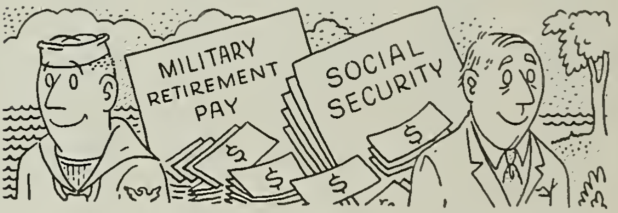
You will be entitled to the above old-age insurance payments when you meet all of the following conditions:

- You are 65 years of age or older
- You are fully insured (see details on page 65)
- You are either fully retired (not working) or have reached 72 years of age. (It is not necessary that you retire completely to get payments while you are between 65 and 72. However, if you are working, you must make less than $1200 per year in order to receive full benefits.)
- You apply for the monthly benefits.

In addition to your payments, your family or dependents, under certain conditions, are entitled to monthly compensation. The members of your family or dependents who are also entitled to monthly compensation when you reach age 65 include:

- ***Your Wife***—Once you become eligible to draw social-security retirement benefits, your wife also becomes eligible for benefits when she reaches age 65, or she may elect to receive reduced benefits at age 62. The rates payable to her at age 62 are figured at a 25 per cent reduction on a graduated scale for each month under age 65. If your wife decides to accept the smaller benefits at any time between 62 and 65, the decision will be final, and she will receive the smaller benefit as long as both of you live. Actually, by electing the reduced benefits, you and your wife will be ahead financially for the first 12 years that you draw old-age compensation.

In the event you die, your wife's benefits will increase. If she was receiving reduced benefits at age 62, her monthly old-age income as a widow would be twice as large. If she selected full benefits payable at age 65, then the amount would be one-and one-half (1½) times as large. That amount would then remain unchanged for the remainder of her lifetime. Your benefits remain the same regardless if your wife is alive or not.



- ***Your Children***—If you have dependent children under 18 years of age who are not married, at the time you are 65 years old and eligible for Social Security benefits, they, too, will be entitled to benefits. Monthly benefits payable to your children will be one-half of the amount you receive. However, as noted above, the total monthly payments to your family (yourself, wife, and children) cannot exceed 80 per cent of your average monthly earnings or more than $200, whichever is smaller. Payments may be made to your children after age 18 if they were disabled before reaching 18 years of age.
- ***Your Widow***—In case you die, your widow will be entitled to old-age retirement benefits only when she reaches age 62, unless she has a child or children under 18 years of age, in her care. In that case she would be entitled to survivor benefits explained below for herself and children at the time of your death. (See chart, page 63 for estimate of the monthly old-age payments your widow will receive.)

Survivors Benefits

If you die, while either fully or currently insured and survived by children under 18, your widow and children will receive an income each month until your youngest child reaches age 18. The amount of death benefits your wife and children will receive depends upon your average monthly earnings.

Survivors benefits are payable in accordance with the monthly scale on page 63, to:

- ***Your Widow***—If you are survived by children under the age of 18. If you do not have any children, she will not draw any benefits until she's eligible for benefits upon reaching age 62. If your widow is not 62, and has a minor child or children in her care, she will be able to receive survivor benefits for herself and children from the time of your death. These survivor benefits will be paid to your widow only until your youngest child becomes 18 years of age (unless physically or mentally disabled).

- ***Your Surviving Children***—If you're survived by children, they are entitled to monthly benefits until they reach age 18 or marry, whichever is sooner. However, benefits are made to disabled children after age 18 if they were totally disabled before they reached the age 18. Your surviving child is entitled to benefits totaling three-fourths of your old-age benefits. If you are survived by more than one child entitled to benefits, then each child will receive one-half of the amount of your monthly old-age benefits, plus an additional one-fourth of the amount of your old-age benefits divided equally among them.
- ***Your Dependent Parents***—If, at the time of your death, you are survived by parents who are dependent upon you, they are also entitled to receive benefits equal to three-quarters of the amount which you would receive each month if you lived to collect old-age benefits at 65, provided you are not survived by a dependent wife or child who could become eligible for survivor benefits. If eligible, your dependent father may get benefits at age 65; your dependent mother may receive full benefits commencing at age 62, provided, however, they establish proof of dependency within two years of your death.

Disability Benefits

If you become totally and permanently disabled, you may be eligible at age 50 for the same benefits you would otherwise have received at 65. For details, regulations and restrictions on this right, check with the nearest branch Social Security office.

However, Social Security disability payments between the ages of 50 and 65 will be reduced if you are drawing workman's compensation, VA disability compensation or physical disability retired pay.

Lump-Sum Payments

When you die, your widow will be entitled to a lump-sum payment. This will be in addition to any monthly payments to which she may be entitled. If you are not survived by a widow, then the person or persons who pay your burial expenses can receive the lump-sum payment. This single payment cannot be more than $255 or more than three times the amount of the old-age monthly benefits you would receive when reaching age 65. A scale of the lump-sum payments is shown on page 63.

Eligibility For Benefits

Now that you know about the many benefits available to you under Social Security laws, let's find out how you and your dependents become eligible for them.

To get any or all of these benefits, you must have been covered by Social Security law for a certain length of time which is measured in "quarters of coverage," as explained earlier. The number of quarters of coverage you have, establishes your status—that is, whether you are *fully* or *currently insured.* This, in turn, determines the benefits for which you are eligible.

Quarter of Coverage. A quarter of coverage is a 3-month period beginning 1 January, 1 April, 1 July, or 1 October of each calendar year in which an individual is paid $50 or more in wages or is credited with $100 in self-employment net earnings.

- ***Fully Insured***—You are considered to be fully insured at the time you or your dependents become eligible for Social Security benefits if you have one quarter of coverage for each full calendar quarter since 1950. At the time of eligibility you must have at least six quarters of coverage. If you have a total of 40 quarters of coverage, you're considered fully insured for life.

The following table shows the quarters of coverage you will need to be fully insured at the time of being eligible for benefits. The first column shows the years in which the claim is to be made (that is the year you reach 65, the year of your death, or the year you become eligible for disability benefits). The second column (Jan-June) shows the number of quarters you need if you or your dependent becomes eligible for benefits during the first half of the year. The third column indicates the number of credits required to become eligible for benefits during the period Jul—Dec.

Quarters of Coverage Needed

Year in which you reach retirement age	Jan.-June	July-Dec.	Year in which you reach retirement age	Jan.-June	July-Dec.
1953 or earlier	6	6	1963	24	25
1954	6	7	1964	26	27
1955	8	9	1965	28	29
1956	10	11	1966	30	31
1957	12	13	1967	32	33
1958	14	15	1968	34	35
1959	16	17	1969	36	37
1960	18	19	1970	38	39
1961	20	21	1971 or later	40	40
1962	22	23			

If you do not have enough quarters of coverage to be fully insured in accordance with the above scale but do have at least six quarters of coverage after 1954, you may become fully insured under a special provision of the law. Under this special provision, you will be fully insured if you have quarters of coverage in all but four of the calendar quarters after 1954.

- *Currently Insured*—You'll be considered "currently insured" at the time you reach retirement age, become disabled, or die, if you have at least six quarters of coverage within the preceding three years. Not all benefits are payable when you're only currently insured.

The following table shows the various Social Security benefits and whether you must be fully insured, currently insured, or both, in order to be eligible for them.

RETIREMENTS PAYMENTS

Monthly payments to—	*If you are—*
You as a retired worker	Fully insured.
And monthly payments to your—	
Wife 62 or over	Fully insured.
Dependent child (under 18 or disabled)	Fully insured.
Wife (regardless of age) if caring for child	Fully insured.
Dependent husband 65 or over	*Both* fully and currently insured.

SURVIVORS PAYMENTS

Monthly payments to your—	*If at death you are—*
Widow 62 or over	Fully insured.
Widow or dependent divorced wife (regardless of age) if caring for child	Either fully or currently insured.
Dependent child (under 18 or disabled)	Either fully or currently insured.
Dependent widower 65 or over	*Both* fully and currently insured.
Dependent parent (mother 62 or father 65)	Fully insured.
Lump-sum payment to your—	
Widow or widower, or to the person who paid your burial expenses (may be made in addition to monthly benefits)	Either fully or currently insured.

DISABILITY PAYMENTS

Monthly payments to—	*If you are both fully and currently insured and have—*
You at age 50-65 if you are totally disabled for work.	20 quarters of coverage in the 40 calendar quarters before the beginning date of your disability.

Claiming Benefits

If you're eligible for any or all of the Social Security benefits explained above, you must apply for them, since the benefit payments are not paid automatically. You must file an application and it must be in the hands of the Social Security Administration before they can make monthly old-age retirement benefits, monthly survivor payments, disability payments or the lump-sum payment can be paid, or before your wage earnings record can be frozen (in the case of disability payments).

Your application should be filed as soon as you become eligible, as the number of back payments for retirement or survivors benefits is limited by law to 12 months. After December 1957, no disability insurence payments can be paid for any month before the claim is filed. You should make your application for all benefits at the Social Security district office nearest you. There, you and your family will receive, free of charge, any help you'll need in making out your application. If, because of sickness or distance, you cannot go to the Social Security office, you may write or telephone for assistance. Your local post office will furnish the address of the nearest Social Security district office.

If you die while on active duty or your death is service connected, your dependents do not have to apply directly for Social Security benefits. This is because the application for VA indemnity and death compensation is a joint application which takes care of both VA and Social Security benefits.

In the event you or your dependents are working when eligible for old-age or survivor benefits, there are certain limitations as to how much you can make each year and still receive Social Security benefits. When you apply for these benefits, the Social Security office will give you complete information on how your earnings will affect your benefit payments and tell you how and when to make reports on your wages to the Social Security Administration.

As a rule, a retired worker, dependent, or survivor who does not earn more than $1200 in a year can get Social Security benefit checks for each month of the year. If you, your dependents or survivors earn more than $1200 in a year, the number of monthly benefit checks due for that year will depend on the amount of your total earnings and on how much work you did in each month. In general, you lose your right to one month's benefit check for each $80 (or fraction of $80) of earnings over $1200 in the year.

If you desire to work after reaching age 65 (62 in the case of women), your military retirement pay will not in any way affect your Social Security old-age benefits. The limitations placed on the amount you may earn while working after you reach the retirement age applies only to wages paid for work actually performed and not to other sources of income such as retirement pay.

When a retired worker is not entitled to a benefit check because of employment for a certain month, no checks are payable for that month to dependents whose benefits are based on his account. The earnings of a person who is receiving benefits as a dependent affect only his own benefit check.

After you reach age 72, your benefits are payable to you no matter how much you earn from then on. But your earnings for the entire taxable year in which you reach 72 must be counted in determining whether payments can be made to you for the months in that year before your 72nd birthday.

Events That Stop Your Benefits

In the event your dependents or survivors get married, their social security benefits will be stopped. Payments to a wife or dependent husband are ended if a divorce is granted. The divorced wife of an insured person may receive payments only while she has in her care a child who is also entitled to monthly payments. Payments to a child also stop when they marry.

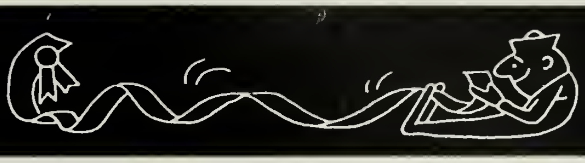
When a child entitled to benefits reaches age 18, his payments are stopped unless he is disabled. When the child of a deceased insured person is adopted, his payments end unless the adopting person is the child's stepparent, grandparent, aunt, or uncle.

When any person receiving monthly benefits dies, his or her payments are ended. The last payment in such cases is for the month immediately before the month of death.

There are four times when it is especially important for you or your dependents to consult the Social Security office. These include:

- ***When reaching retirement age***—When you reach retirement age (65 for men, 62 for women) you should get in touch with your Social Security office promptly for information about your Social Security rights. If your earnings are not more than $2080 a year, or if there is even one month in which you do not work after you reach retirement age, you may be eligible for some old-age insurance payments. Even if you're not immediately eligible for benefits, it may be to your advantage to make sure you have all the information you need about your benefit rights.
- ***When you reach 72***—When you reach age 72, get in touch with your Social Security office. If you are insured, benefits may be payable to you even if you are working full time.
- ***If you die***—After your death, some member of your family should inquire promptly at the nearest Social Security office to learn if survivors insurance benefits are payable.
- ***If you are disabled before age 65***—After you have been employed in work covered by Social Security, if you become disabled, you should get in touch with your Social Security office. You may be able to have your earnings account frozen to protect your benefit rights, or if you are between age 50 and 65, you may be eligible for disability benefits.

your insurance



IN THE PAST 40 YEARS there have been four different programs to provide financial protection to the survivors of deceased Navymen and other members of the Armed Forces.

First, there was low-cost U. S. Government Life Insurance (USGLI), which was started back in World War I. Then, there was National Service Life Insurance (NSLI), another low-cost insurance plan, which replaced USGLI in 1940. After that came the Servicemen's Indemnity, commonly known as "$10,000 free insurance," which was available from 25 Apr 1951 through 31 Dec 1956. Today we have the Servicemen's and Veterans' Survivor Benefits Act (see page 74), which has been in effect since 1 Jan 1957.

Unless you now have an NSLI or USGLI policy under waiver (see details further on if this applies to you) your dependents are entitled to receive the death benefits of the new act if you die while on active duty or as a result of service-connected causes after separation. However, you might still want to give your survivors the extra protection of insurance on your life.

There are two ways of doing this.

If you are eligible for NSLI or USGLI, you may obtain government insurance. If you're not eligible, or if you'd like to supplement your present government insurance or if you'd prefer private insurance, you can take out a policy from a private firm. Either way you can arrange to pay your premiums through an *allotment*.

Now, let's find out who can—and who can't—get government insurance, and to save unnecessary reading we'll start with the "who can'ts."

Who Is *Not* Eligible for USGLI or NSLI?

Broadly speaking, except for service-connected disability insurance and the renewal and replacement of certain NSLI and USGLI policies, the government is not entering into any new insurance contracts. Therefore, *if you have never held an NSLI or USGLI policy, you cannot take one out now unless you become disabled.*

In addition, even though you may once have held an NSLI or USGLI policy, you *cannot* renew or reinstate it if:

- Your policy was not in force on or after 25 Apr 1951.
- You let your policy lapse during a *break in service of more than 120 days.*
- You surrendered your policy for cash, but failed to renew or reinstate it during a *break in service of more than 120 days.*
- You had a term policy under waiver, but failed to resume premium payments during a *break in service of more than 120 days.*

Who *Is* Eligible for NSLI and USGLI?

When the "free insurance" went into effect on 25 Apr 1951, most Navymen were paying premiums on USGLI or NSLI policies. However, *between that date and 31 Dec 1956 many Navymen on active duty let their policies expire, surrendered them for cash or*

waived the payment of premiums in order to take advantage of the free insurance. If that's what you did, and you've had no break in active service of more than 120 days since then, *you are eligible to reinstate or replace your policy* any time while on active duty, or within 120 days after separation from active duty. If you have had a break in service of *more than 120 days since you did any of these things with your insurance, you are only eligible for NSLI or USGLI if you resumed premium payments on "waivered" insurance or reinstated or replaced surrendered, lapsed or expired insurance within the first 120 days after you were separated.*

For further details, read the section below which applies to your case and check with your Insurance Officer.

- ***Policies Surrendered for Cash***—If you surrendered a permanent plan policy for cash while on active duty after 24 Apr 1951 and before 1 Jan 1957, you may obtain, either while in active service or within 120 days after separation, *a new policy at the premium for your present age on the same plan* and not in excess of the amount surrendered, or you may *reinstate your old policy* (by paying up the cash reserve on that policy).

Personnel now on active duty who have had any break in service of *more* than 120 days since the date of surrender or expiration do not have the right to reinstate or replace such policies unless they took that action within the 120-day period after they were separated. Breaks in service of 120 days or less do not affect that right.

Those who are eligible may reinstate surrendered permanent plan policies by paying the premium for the effective month of reinstatement, plus the cash reserve on the old policy. In addition, those reinstating USGLI (this doesn't apply to NSLI) will have to repay any termination dividends they received upon surrender for cash in or after 1953, plus interest at 3½ per cent per year. The initial cash outlay for reinstatement can be reduced by borrowing against the reinstated loan value of the policy. (Such loans may not exceed 94 per cent of the cash value of the reinstated policy.) However, when you borrow against the policy you create a debt against it, and the loan interest will be at four per cent annually. Repayment of loan is not mandatory; however, any loan balance will be deducted from claim proceeds.

Replacing permanent plan insurance with a new policy requires a smaller initial cash outlay than reinstatement, but your premiums will be larger because they'll be based on a later insurance age than the one on your old policy. To take out a new policy you merely pay the first month's premium at your insurance age as of the effective date of the new policy, or, to take advantage of a slightly younger insurance age, you may request that your policy be antedated. In that case the effective date of the new insurance may be the first day of any month back to but not exceeding six months earlier.

- ***Lapsed or Expired Five-Year Level Premium Term Insurance***—This may apply to you if you let your government term insurance *expire* or *lapse.* First, though, you should understand what is meant by these two words.

Your term insurance *expired* if, at the end of the five-year term for which you had contracted and paid premiums, you did not renew the policy for another five-year term.

Your term insurance *lapsed* if you failed to pay the premiums due on it. However, *the only type of* LAPSED *government* TERM *insurance which can be renewed or reinstated is five-year term NSLI which has lapsed since 23 Jul 1953 through failure to pay either or both of the last two monthly premiums of the term period.* This means that if you let a five-year term NSLI policy lapse before 23 Jul 1953, or you let such a policy lapse after that date, but *more than two months before the end of the five-year term,* you CANNOT renew or reinstate your policy.

Now, let's see what you can do about *expired* or *lapsed* term insurance.

If you had a five-year term policy which *expired* while you were on active duty after 25 Apr 1951 and before 1 Jan 1957, you may replace it with another term policy (with premiums based on your age at the time of replacement) any time while you're on active duty or within 120 days after separation. You may also replace such a policy if the term expired during a break in service of 120 days or less after 25 Apr 1951 and before 1 Jan 1957.

Your replacement application must be accompanied by payment of premiums and evidence of good health satisfactory to the Administrator of Veterans Affairs. Once the policy has been replaced, it may be converted to a permanent plan policy at any time. (For details on this, see the section on converting term insurance or changing a permanent plan.)

If your five-year term National Service Life Insurance has *lapsed* since 23 Jul 1953 for failure to pay either or both of the *last two monthly perminums of the term period,* you may renew or reinstate such insurance, provided you do so before the expiration of the next succeeding term period. The VA will forward reinstatement applications and instructions to all individuals in this category without application by the policyholder. To reinstate, you must then submit the required premiums and evidence of good health.

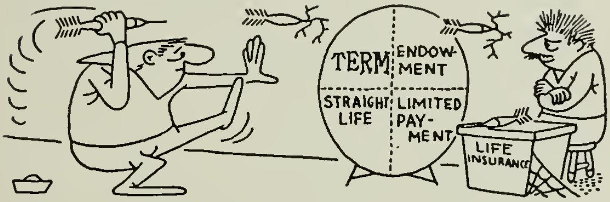
These reinstatement and replacement rights also apply to those who were Naval Aviation Cadets or Midshipmen of the Naval Academy on 25 Apr 1951 and were later commissioned or enlisted.

- ***Application for Reinstatement or Replacement***—Inquiries or completed applications having to do with reinstatement or replacement of policies should be addressed to:

Veterans Administration Insurance Center
Attention: Replacement Section
Munitions Building
Washington 25, D. C.

If you don't know the policy number of your surrendered insurance, you may still forward your application and the VA will add that information.

The following forms should be used:



- *For replacing expired term insurance*—VA Form 9-4353.
- *For replacing surrendered permanent plan insurance*—VA Form 9-4354.
- *For reinstating surrendered permanent plan insurance*—VA Form 9-4363.

When any of the above forms are completed, the legend "Section 623" should be conspicuously written or stamped across its top margin for identification purposes.

- ***Waivers***—While the $10,000 free indemnity was in effect, it was possible for a serviceman to "waive" his government insurance premiums. That is, his term insurance continued in effect but he paid no premiums while on active duty. His permanent plan insurance continued in effect also, although he did not pay that portion of his premium which covered the "pure insurance risk." In effect his insurance went on even though he waived (did not pay) the full premiums on his permanent insurance or any premiums on his term insurance while serving on active duty.

Waivers of premiums (except on service-connected disability insurance) are no longer granted, but if you had a waiver on your NSLI or USGLI in effect on 31 Dec 1956 this waiver may be continued or you may terminate it at any time. This means that while on active duty you still have in effect your full NSLI or USGLI insurance, up to the amount of $10,000.

However, if you die while your policy is still under in-service waiver, your widow, children or parents will NOT *be entitled to the dependency and indemnity compensation provided for in Public Law 881. Instead, they will receive only the VA death compensation payments in effect before January 1957, which in most cases are lower than the new benefits.* (Reservists should note that benefits previously payable to them under the Federal Employees Compensation Act were cancelled as of 1 Jan 1957, except that survivors already receiving such benefits can elect to continue doing so. The new survivor benefit laws apply in the same way to all components of the armed forces, without any distinction as to whether death occurs in peace or war.)

In some cases an individual might gain by retaining his insurance under waiver—for example, a bachelor with no dependents or a man in pay grade E-1 or E-2 with a wife and four or more children under 18. In the latter case (because of the widow and large number of children) the payments to his survivors could be greater under the old peacetime VA compensation rates than they would under Public Law 881.

- ***Conversion or Continuance of Waivers***—Five-year-level premium *term* policies now under waiver may be converted to permanent plan policies at any time. To do this, you submit an Application for Conversion (VA Form 9-358), pay the required premium and submit a supplemental statement as follows, over the date of application and your signature:

> **"I request that the present waiver of premiums under section 622 of the National Service Life Insurance Act, as amended, be cancelled effective upon conversion of my term insurance."**

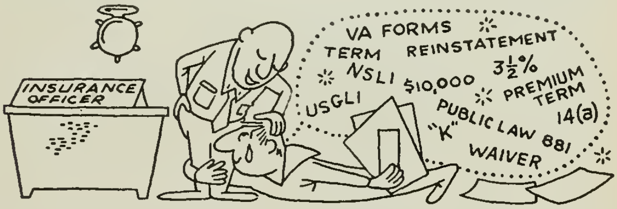
If you've already submitted an application for conversion without specifically requesting cancellation of waiver, you must further request cancellation by a letter containing the supplemental data quoted above.

To convert a term policy to a permanent plan, but still keep a waiver in effect, submit VA Form 9-358 without the supplemental statement.

To terminate waiver of premiums on a National Service or U.S. Government Life Insurance policy, a request in writing should be submitted to the Veterans Administration Insurance Center, Munitions Building, Washington 25, D. C. However, in the case of term insurance with premiums under waiver, the registration of an allotment for payment of premiums will constitute a request for cancellation of the waiver of premiums.

Requests for a retroactive allotment for payment of premiums will be approved if the late submission is definitely beyond the control of the allotter.

If you have term insurance under waiver and don't want to pay the required premium, but do want your dependents to be eligible for the increased survivor benefits authorized under Public Law 881, you should request termination of your insurance waiver, then let your term policy lapse for nonpayment of premiums. If you're confused about this (and who isn't?) see your Insurance Officer pronto.



- ***Converting Term Insurance or Changing a Permanent***

Plan—If you're eligible to apply for term insurance to replace that which has expired, you may request simultaneous conversion to a permanent plan. To do so, a specific request for both actions must be submitted—that is an application to replace the insurance which expired (VA Form 9-4353, medical) and an application for conversion (VA Form 9-358). The first and subsequent premiums will be at the premium rate for the converted insurance.

Similarly, if you are eligible to apply for reinstatement or replacement of a permanent-plan policy which was surrendered for cash, you may request simultaneous change of plan. For example, if the surrendered insurance was a 20-payment life policy, you could request simultaneous reinstatement or replacement and change to a 30-payment life policy. Again, a specific request for both actions must be submitted—namely, an application to replace insurance which was surrendered for cash (VA Form 9-4354) or an application to reinstate insurance which was surrendered for cash (VA Form 9-4363), plus an application for change of permanent plan to a policy with a lower reserve value (VA Form 9-1549, medical) or an application for change of permanent plan to a policy with a higher reserve value (VA Form 9-1550). The initial and subsequent premiums should be at the rate for the new plan. (NOTE: A USGLI policy—"K" insurance—may be changed to a plan with a lower reserve value only within five years following the effective date.)

In addition to the requirements mentioned in the above paragraph, it is necessary in the case of simultaneous reinstatement and change of plan to provide the proper reserve for the new plan of insurance. This reserve has to be computed by the Veterans' Administration. Therefore, in advance, or when you submit such an application, you should request that the VA advise you as to the amount required, and then you must provide payment in that amount. Such requests should be addressed to the Veterans' Administration Insurance Center, Replacement Section, Munitions Building, Washington 25, D. C.

Further information on National Service and U. S. Government Life Insurance may be obtained from your Insurance Officer, from *BuPers Manual* or the *Insurance Manual for Benefits and Insurance Officers* (NavPers 15640, Revised).

- ***Service-Connected Disability Insurance***—Post-service nonparticipating insurance for service-connected disability is still available to Reserves or Regulars who are disabled while on continuous active duty. It is also available to Reserves who are disabled while on active duty for training for not less than three or more than six months, under the Armed Forces Reserve Act of 1952, as amended.

Insurance plans offered to personnel in this category are Five-Year Level Premium Term, Ordinary Life, Thirty-Payment Life, Twenty-Payment Life, Twenty-Year Endowment at Age 60 or Endowment at Age 65.

To be eligible you must be released or separated from active duty under other than dishonorable conditions and must be found by the Administrator of Veterans Affairs to be suffering from a disability or disabilities rated at 10 per cent or more—except for which you would meet the established qualifications for insurance under the good health provisions of the National Service Life Insurance Act of 1940, as amended. (You are not eligible if the disability is a dental condition for which a rating is made only for purposes of dental treatment.)

Upon application and payment of premium to the VA the insurance may be granted any time within one year after the date the Administrator of Veterans Affairs determines that the disability is service-connected.

Private Insurance

If you're ineligible for NSLI or USGLI you can still give your survivors the protection of insurance by taking out a policy from a private firm in which case you can arrange to pay premiums through an allotment.

In choosing your policy you'll find there are only four basic types to consider—*straight life, term, limited payment* and *endowment*. There are also *combination policies* which usually include both straight life and term insurance.

On a straight life policy you pay premiums over a lifetime. It is the most widely-used type of insurance because it provides lifetime protection at less cost than any other permanent insurance.

Term insurance, which has no cash value and only gives temporary protection over a certain period, is the cheapest of all. On it you pay premiums for a set term—usually one to 15 years—and its protection terminates at the end of that period.

Limited payment policies provide lifetime protection and contain cash values just as straight life policies do. It is more expensive than straight life, however, because it's designed to give you a paid-up policy at the end of a certain number of years or at a certain age. After that you're still fully protected, but you no longer have to pay premiums.

Endowment policies are essentially a form of insured savings. This type provides for the payment of its face value to the policyholder at a future date selected by him. If he dies before that date, the face value will go to a person named by him. Premiums on this type are higher than on any other, since the emphasis is on savings, rather than protection.

Your Insurance Officer or agent can help you pick the plan that suits you best.

taxes - exemptions and deductions

TAXES FOR MOST NAVYMEN are as inevitable as pay day and even the knowledge that withholding taxes help pay your own salary doesn't ease the pain of that bi-weekly "bite" Uncle puts on your pay. However, it takes money to keep our country running smoothly and the poor taxpaying civilians can't be expected to foot the whole bill.

Thus, unless you have enough dependents or other deductions to take you out of the taxable income brackets, a certain amount of your pay will be withheld each month so that you can meet your federal income tax obligation on your Navy pay each year by the April 15 deadline.

By law you—and every person whose yearly gross income is $600 or more—must file an income tax return even if deductions will exempt you from paying any tax. So when your disbursing office passes out the "W-2 Forms" (statement of wages paid you and taxes withheld), you might as well snag a copy of Form 1040 or 1040A and get busy—not only are there penalties for not filing, but that's the only way you can get any refund which may be due you.

Filing a correct return isn't difficult if you know what you're doing, and one of the best sources for straight scoop on your tax rights, benefits and obligations is the BuSandA pamphlet *Federal Income Tax Information*. This handy booklet contains the latest information, and is reprinted each year and distributed to all ships and stations in ample time for you to use a copy in preparing your return. Below in very brief form, are the main points you should know to file a correct return:

- ***Who Must File***—Practically every individual citizen, single or married (including minors), whose gross income is $600 or more. There are certain exceptions based on age and self-employment; these may be found in BuSandA's pamphlet.

- ***When To File***—Income tax returns based on the calendar year must be filed on or before 15 April. However, if you are living or traveling outside the U. S., the District of Columbia, Alaska or Hawaii you have until 15 June to file your return (but, you will be charged interest on the unpaid tax). In addition, the Director of Internal Revenue for the district in which you normally file your returns may, upon application from you, grant an extension of as much as six months (more if you are abroad).

- ***How To Prepare Returns***—Broadly speaking, your income tax is based upon your "gross income" *minus* "business expenses" and "allowable deductions" *multiplied* by the tax rates and minus "credits." In other words, certain specified expenses are subtracted from gross income to find "adjusted gross income;" deductions are subtracted from adjusted gross income to find "taxable" income; and the appropriate tax rate is applied to the taxable income to find the amount of tax you owe. Credits for the taxes withheld by your disbursing officer, payments on estimated tax—or for retirement income credit and so forth—are then subtracted from the tax you owe. If the total amount withheld is smaller than the amount you owe, then you must pay the difference; if the amount withheld is larger than the amount of your tax—you'll get a refund.

In order to figure your "gross income," "adjusted gross income," your exemptions and your "taxable income" here is what you—as a Navyman—may include in each category:

Income That Must Be Reported

- ***Gross Income***—This include gains, profits and income derived from salaries, wages, or compensation for personal service, of whatever kind and in whatever form paid—in short, money from practically any source. The following items from naval sources, to the extent that they are not reduced by allowable "business expenses," should be reported as "gross income":

- Active duty pay (including such incentive and special pay as "sea pay" and "flight skins").

- Retired pay if retired for other than physical disability resulting from active service.

- Retainer pay of enlisted members transferred to the Fleet Reserve.

- Retired pay of enlisted members transferred to the retired list for other than physical disability resulting from active service.

- Pay of all midshipmen and NavCads, and retainer pay of $50 and $100 per month for NROTC and Naval Aviation College Program enrollees.

- Compensation for employment in officers' clubs, messes, station theaters, etc.

- Interest on Navy Savings Deposits.

- Interest on Armed Forces Leave Bonds, or leave payments.

- Lump sum payment received by officers upon honorable discharge or complete separation other than disability severance pay.

- Mileage and per diem—the total amount received as mileage and per diem should be included, but such

actual expenses as meals, fares and lodging may be deducted. (See below.)

- Travel allowance on discharge and furlough travel allowance on reenlistment.
- Lump-sum readjustment payments to Reservists involuntarily released to inactive duty after five or more years of continuous active duty.

Navy Income That Need Not Be Reported

The following items received from the Navy are excluded from "gross income" and need not be reported:

- Basic allowance for quarters, and any amounts paid for quarters, heat and light furnished in kind.
- Basic allowance for subsistence.
- Cost to government for transportation of dependents and household effects.
- Rations furnished in kind to enlisted men.
- Uniform gratuity or clothing allowance for officer and enlisted.
- Retired pay of persons retired prior to 1 Oct 1949 for physical disability resulting from active service and who are receiving pay under laws in effect prior to 1 Oct 1949.
- Disability retirement or severance pay received for separation after 30 Sep 1949 under the Career Compensation Act of 1949.
- Uniforms furnished in kind to enlisted men.
- Death gratuities.
- Personal money allowances received by fleet admirals, admirals and vice admirals.
- Leave bonds or other payments made under section 6 of the Armed Forces Leave Act of 1946, except that the interest on these constitutes gross income in the year received.
- Money received by naval attaches for entertaining and exceptional purposes, if expended solely in connection with official duties.
- Mustering out pay.
- State bonus payments for services rendered to the United States.
- Amounts paid to or on behalf of veterans under the WW II and Korean GI Bills.

Deductible Items

- ***Adjusted Gross Income***—Deducting any applicable items in the following list from your gross income will give you your "adjusted gross income." The following are deductible items.
- Mess bills afloat—an officer with or without dependents who is assigned permanent duty afloat, may deduct mess bills for any periods during which his ship is away from its home port for longer than an ordinary work day (and the same principle applies to air personnel away from a squadron's home base).
- Travel expense—the actual expenses may be deducted if you're traveling in a mileage or per diem status.
- Transportation expenses may be deducted by Reserve personnel if incurred while performing authorized drills under competent orders, if they do not receive reimbursement for such travel.
- Expenses attributable to rents and royalties are deductible.
- Losses from sale or exchange of property are dedeductible items in computing your taxable income.

Deductions—Once you have found your adjusted gross income you may make deductions for the following items to which you are entitled.

If you plan to use the "short form" (Form 1040A) you need not bother with these deductions, since that form makes use of a "standard deduction" amounting to about 10 per cent of the adjusted gross income. Here are the deductions allowed if you use the "long form" (Form 1040) and itemize your deductions:

- Contributions paid during the taxable year for exclusively public use (churches, United Givers Fund, Red Cross, Navy Relief, USO, etc.).
- Interest on personal indebtedness, such as mortgage on real estate or, under certain circumstances and to a limited extent carrying charges on installment purchases of personal property.
- As a general rule, state and local taxes are deductible by the person upon whom they are imposed by law. However, federal excise taxes (luxury taxes), Federal income and certain foreign taxes are not deductible.
- Extraordinary medical and dental care.
- During periods of illness or hospitalization you may (under certain circumstances) be entitled to deduct your pay (up to a total of $100 weekly). To support a claim for this exclusion, however, you should furnish a statement from the attending physician, the hospital, or the employer, or other acceptable evidence of absence, illness, and rate of payment. And you may not deduct the first seven calendar days of such a period unless the absence is a result of injury or you are hospitalized at least one day.
- Child care, a deduction limited to $600, is allowed working women or widowers, as well as men who are legally separated or divorced, for the expense of caring for certain of their dependents in order that the taxpayer may be gainfully employed.
- Losses. For example, a loss occasioned by damage to an automobile is deductible to the extent that it is not covered by insurance, unless it is the result of a willful negligence on your part.
- Miscellaneous deductible items include uniform equipment (insignia of rank, corps, etc.); amount of reenlistment bonus refunded by reason of termination of enlistment; alimony payments, if included in the wife's gross income; dues to professional societies, etc.

Items which are not deductible from your adjusted gross income include the following: a) personal living or family expenses other than the exceptions noted above; b) cost of moving and shipping household goods; c) cost of transportation of dependents; d) premiums paid on life insurance policies; e) expenses of visiting home while on furlough, leave or liberty; and f) amounts paid for United States Savings Bonds.

Exemptions—Exemptions for you and your dependents are treated as deductions from adjusted gross income in arriving at "taxable income." The amount of exemption allowed for each dependent is $600 and exemptions are allowed for the following:

- You, the taxpayer.
- Your spouse.
- Each "dependent." The taxpayer can claim credit only for persons who meet all of the dependency requirements listed on the instructions accompanying Forms 1040 and 1040A.

An individual receiving support from two or more persons, none of whom furnishes more than half, may be claimed as a dependent under certain circumstances. The conditions are listed in the instructions.

Citizens of foreign countries will not qualify as dependents unless they are residents of either the U. S., Canada, Mexico, Canal Zone or the Republic of Panama.

A child born or legally adopted in the Philippine Islands before 1 Jan 1956 may be claimed as the dependent of its parent if the parent was a member of the U. S. armed forces at the time the child was born or adopted and the child is a resident of the Philippine Islands during the taxable year.

State Taxes

YOU SHOULD ALSO be aware that many states, territories and possessions (and some communities) of the U. S. have income tax laws. *And*, unless your legal home state makes an exception for members of the armed forces, you are not excused from these taxes merely because you are on active duty outside the boundaries of your home state. The Soldiers' and Sailors' Relief Act does not exempt you from the income tax and personal property taxes imposed by your home state, either.

That Act, as amended, *does prevent taxing of your military pay or personal property by any state in which you are living solely by reason of naval or military duty orders.* But the law does not exempt retired and retainer pay, separate income earned by your spouse or family (or personal property owned by them), income from business, investments, rents and other non-military sources, or the taxing of "real" property (a house, for instance) which you buy in the state where you're pulling duty.

If you're in doubt about your state's tax laws, you'd do well to check with the office holding BuSandA Instructions aboard your ship or station. Each year, S&A's tax experts publish an instruction (in the 5800 series) containing a summary of state tax information.

A state-by-state roundup on tax regulations as they apply to Navymen appeared in the April 1957 issue of ALL HANDS on page 34.

survivors' benefits

THIS SECTION IS directed primarily to the Navyman's close dependents and next of kin. It deals with a situation which may be unpleasant to consider but is nevertheless inevitable. Let's face it, there's always a chance that, sooner or later, a man may become a casualty either at home, on the highway, or while on duty at his ship or station.

What happens? What does the Navy do about it, and what are your responsibilities, as his next of kin?

As a rule, you will receive official guidance from the Navy, by an officer specially designated for this purpose.

However, if a Navyman should become a casualty while on leave or at home, you, as his closest next of kin, must:

- Notify, if possible, his commanding officer, or
- Notify the nearest naval activity, giving the Navyman's full name, rank or rate, service number, home address and any available details concerning his death.

If neither of these is known or cannot be reached for any reason you should notify the Chief of Naval Personnel, Casualty Branch, Navy Department, Washington 25, D. C. by collect telegram. The Casualty Branch, in turn, will relay the information to the proper naval authorities. Notification may be made by you, a doctor, minister, police or other competent authority.

Should death occur while the Navyman is on active duty away from home, you will be notified officially by his commanding officer, the commandant of the naval district in which the casualty occurs, or by the Casualty Branch of the Bureau of Naval Personnel.

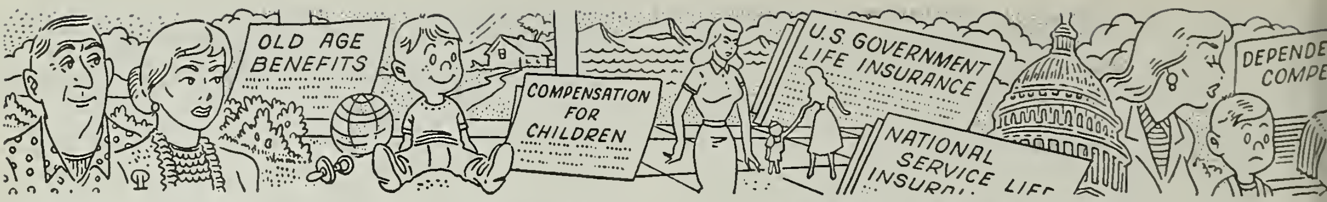
It is at this time that the Navy appoints an officer to extend all possible aid to a deceased Navyman's family.

Casualty Assistance Calls Program

Under provisions of the Casualty Assistance Calls Program (CACP), the principal dependents of a Navyman who dies on active duty are visited by a commissioned naval officer who helps them obtain the rights, benefits, and privileges to which they are entitled.

He will offer condolences on behalf of naval authorities and will counsel on funeral arrangements, financial assistance and problems which may arise. His first call is made within 24 hours after notification of death.

He will assist you and members of the family with special problems and will provide general information



on death gratuity, unpaid pay and allowances, social security, dependency, compensation or pensions, personal effects, insurance, transportation of dependents and household goods, medical care, exchange and commissary privileges. Specific information regarding the technicalities of the laws providing for these benefits will be provided by the agency charged with their administration.

Services provided through this program are automatic and you need not initiate any action. For complete details see BuPers Inst. 1750.3.

The Survivor Benefits Act (Public Law 881, 84th Congress)

A new law has been passed which is of considerable importance to you as a dependent or close relative of a Navyman. It is the Servicemen's and Veterans' Survivor Benefits Act (Public Law 881, 84th Congress), more briefly known as the Survivor Benefits Act. It became effective 1 Jan 1957 and makes widespread changes in the various laws concerning dependent survivors of Navymen who *die from service-connected causes.* It applies also to dependent survivors of servicemen who have died *from service-connected causes* during the past. This law also enables retiring naval personnel to receive *both* Social Security old age benefits *and* military retirement pay, based on the same years of service after 1950.

The Act:

- Increases Veterans Administration payments, especially to widows.
- Provides for more balanced levels of payment to widows, especially in later life.
- Broadens and makes permanent Social Security benefits for members of the armed forces.
- Relates survivor benefits to the pay received.
- Equalizes payments to survivors by eliminating distinctions between wartime and peacetime deaths.
- Places all members of the armed forces, Regular and Reserve, under the same survivor benefits law.

What is a service-connected death? Generally speaking, a Navyman who dies on active duty may be considered as having a service-connected death. If he dies in an automobile accident while on leave, for example, or from illness while on leave, his death is considered as much service-connected as if he were to be killed in action. However, the entitlement of his dependents to the indemnity compensation administered by VA will be contingent upon a determination as to whether the death was the result of his own misconduct (for example, reckless driving, speeding, driving while intoxicated, etc.)

Benefits Under New and Old Law

The Act takes away no benefits anyone is now receiving. Those survivors who are now drawing benefits under old laws may continue to do so if they will receive more that way. However, they may receive the benefits of the new law any time they decide to do so.

Another law just passed (Public Law 880, 84th Congress) makes it possible for former Navymen, as well as all others under Social Security, if totally disabled, to begin drawing Social Security disability payments at age 50.

Six-Month Death Gratuity

The new law fixes $800 as the smallest lump-sum payment to the widow or other designated near relative in the event of a service-connected death while he is on active duty. Under the earlier law, the minimum was $468.

The six-month death gratuity is paid by the Navy as soon as possible after the serviceman's death. It is computed as follows:

Total monthly pay (not including any allowances) × 6 = *death gratuity.*

Here's an example: A Navyman in pay grade E-5, with more than four and less than six years' service, dies on active duty of a service-connected cause. His survivor receives six times his monthly basic pay of $183.30 — a total of $1099.80.

The new law also provides that the maximum death gratuity may not be more than $3000, regardless of the monthly pay of the deceased.

The death gratuity is in the nature of an emergency payment, and is often urgently needed by the widow to tide her and the children over during the period between the death of the serviceman and the time when they can return to their home. This payment also helps to cover immediate living expenses.

Action necessary is a finding that death has actually occurred through service-connected causes while on active duty, active duty for training, inactive duty training or within 120 days after separation.

Death Compensation

If a Navyman dies from a *service-connected cause,* as determined by the Veterans Administration, the Survivor Benefits Act provides for the payment of what is known as "Dependency and Indemnity Compensation" to eligible survivors. This payment may also be made to survivors of *veterans who die of a service-connected cause.* This compensation is tax-free.

Here's an important point for older service personnel to remember: If you ever held U. S. Government Life Insurance or National Service Life Insurance and if

CASUALTY BRANCH NAVY DEPT.
CASUALTY ASSISTANCE CALLS PROGRAM
RIGHTS AND BENEF
THE SURVIVOR BENEFITS ACT
MEDICAL CARE
GRATUITY

TRANSPORTATION OF DEPENDENTS
COMPENSATION FOR DEPENDENT PARENTS
PERSONAL EFFECTS

you executed a waiver so you could obtain free protection under the indemnity plan, you must have DISCONTINUED YOUR WAIVER *before your death to qualify your survivors for the new and higher death compensation rates. For more details see pages 67 and 69.*

Compensation may be paid in any one, or in any combination, of three ways.

• **Compensation for a Widow.** Payable monthly by the Veterans Administration to a serviceman's widow as long as she does not remarry. The amount of compensation is related to the pay held by the serviceman at the time of his death, under the following formula:

$112 + 12 per cent of member's monthly basic pay (rounded to next highest dollar) = monthly compensation to widow.

For example: A man in pay grade E-6, with more than eight and less than 10 years' service, dies. His monthly basic pay was $220.30. The compensation paid his widow is $112 plus $27 (12 per cent of his basic pay, rounded to next highest dollar), a total of $139 per month.

In the case of an eligible veteran, the same formula is applied against his pay grade held at the time of separation from the Navy.

The minimum payment of this type under the new law is $122 per month. No maximum limit is set, except by application of the formula. Under previous law, a widow would receive $87 per month if the death was connected with wartime service, or $69.60 if it was peacetime service-connected.

Under the new law, the same payment is made whether the death is wartime or peacetime service-connected, and whether the member was USN or USNR.

If a widow is left with dependent children, additional income for their support will be provided by Social Security benefits.

• **Compensation for Children.** This may be paid by the Veterans Administration for the support of a deceased Navyman's children if their mother died or was divorced from the serviceman before his death, or if she dies or remarries after his death.

The Act provides the following monthly rates of payment in such cases:

For 1 child	$ 70
For 2 children	$100
For 3 children	$130
Each additional child	$ 25

These payments are in addition to the benefits for which the children may be eligible under Social Security.

Compensation normally stops when the child becomes 18, but may be continued to 21 if in school, or for so long as a child is helpless.

The same rates are payable whether the death is wartime or peacetime service-connected.

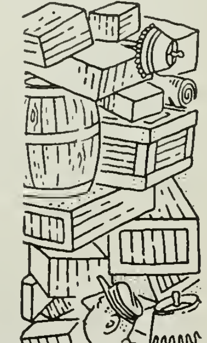
• **Compensation for Dependent Parents.** The new law liberalizes the amount of income a parent may receive and remain eligible for the new form of compensation from the Veterans Administration. Compensation is provided on a sliding scale according to their other income: If both parents were dependent, they may receive as much as $100 per month in compensation, if their combined other income is less than $1000 a year. When their combined other yearly income is more than $1350 and less than $1700, they may receive a monthly compensation payment of $60. The same rates are payable whether the death of the Navyman is wartime or peacetime service-connected.

• **Unpaid Pay and Allowances (Arrears of Pay)**—This is money due on the pay account of a deceased Navyman, including allowances or other amounts to his credit at time of death. A claim form is forwarded by Casualty Branch to the designated beneficiary, next-of-kin, or legal heir (noted on DD Form 93-1.) It generally requires at least a month for settlement to be made. (The pay and allowances of a Navyman stop on date of death.)

Other Survivor Benefits

• **Household Effects**—If a Navyman dies on active duty the Navy will ship his household goods to the home of the person legally entitled to them.

Shipment will be made regardless of rank or rate, with the following limitations: (1) Shipment must be from the last permanent duty station or place of storage, and (2), shipment must be made within one year from date of death or one year from date of official report that the Navyman is dead, injured or missing for a period of 30 days or more.



In addition to household goods, one privately owned automobile may be shipped to the same destination as the household effects if the auto is located outside the United States or in Alaska at the time of the Navyman's death.

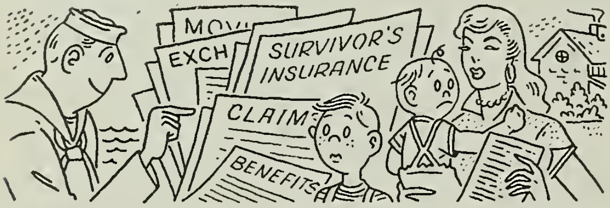
When necessary in connection

MESTEAD
VILEGES
FEDERAL EMPLOYMENT PREFERENCE
DEPENDENTS MEDICAL
TRANSPORTATION OF HOUSEHOLD EFFECTS

with a shipment, the Navy will also pay for as much as six months' storage of your household effects.

Application for shipment or temporary storage should be made to the designated shipping activity which is nearest to the household goods to be shipped.

- ***Dependents Transportation***—When a Navyman dies while on active duty—regardless of his rank or rate, the place or cause of death—his dependents will be authorized transportation from the place at which the notice of death was received to: (1) The official residence of record as listed in the personnel record of the deceased, or (2) to any other place designated by the surviving dependent.



To obtain this transportation, the survivor should apply to the disbursing office of the nearest naval activity or to the station to which the Navyman was attached.

If your wife (or other survivor) performs the travel at her own expense, she may submit a claim for reimbursement to the Chief of Naval Personnel (Attn: Pers E3), Navy Department, Washington 25, D. C.

- ***Social Security Benefits***—Surviving dependents are entitled to Social Security benefits. For a detailed explanation, see page 61.
- ***Insurance***—If a Navyman has taken advantage of the opportunity to take out government insurance, his survivors will benefit. For details, see pages 67-70.
- ***Homestead Privileges***—Homestead rights (preference in staking claims to government land for purposes of establishing a home) may be available to surviving widows of eligible veterans, or widows of men who died on active duty. To take advantage of this, you may request information from Bureau of Land Management, Department of the Interior, Washington 25, D. C.
- ***Federal Employment Preference*** — Certain Civil Service preference benefits are granted to widows of service personnel in connection with examinations, ratings, appointments and reinstatements—if they have not remarried. Unremarried widows of Navymen who have served in time of war are given 10 points in addition to their earned ratings in civil service exams.

Under certain circumstances, a mother of a Navyman who dies in service may also be entitled to preference.

Specific details concerning preference eligibility may be obtained from any U. S. Civil Service office or from your local U. S. Post Office. In addition, a dependent who is interested in getting employment should visit the nearest United States Employment Service Office for information about job opportunities.

- ***Commissary and Exchange Privileges***—The privilege of making purchases at any armed forces commissary and exchange is extended to the unremarried widow of a service member who died while on active duty or in a retired or retainer pay status. Application for exchange privileges should be made to the commanding officer of the activity where the commissary is located.
- ***Dependents Medical Care***—Unremarried widows and unmarried minor children of Navymen who die on active duty, Fleet Reservists, or Naval Reservists with eight or more years' service retired with pay, are eligible for medical care in uniformed services medical activities where facilities are available. (See pages 9-11 for new provisions on medical and dental care.)
- ***Personal Effects***—When a Navyman dies his personal effects will be delivered to the next-of-kin:

If the death occurs within the continental limits of the U. S. and there is no doubt as to next-of-kin, personal effects may be shipped direct, shipped with the remains, or delivered by the escort accompanying the remains.

If death occurs outside the U. S. or there is doubt as to the next-of-kin, the Navyman's effects are shipped to the U. S. Naval Supply Depot Clearfield, Ogden, Utah, and held until the Casualty Branch of the Bureau (Pers G23) determines who is entitled to them or turns them over to the legal administrator of his estate. That office also instigates searches to locate missing effects.

If personal effects are damaged or lost in connection with naval service, a claim for reimbursement may be submitted.

Information on submitting claims and claim forms may be obtained by writing to the Chief of Naval Personnel (Attn: Pers E3) Navy Dept., Wash. 25, D. C.

- ***Burial Expense***—Burial may be made at an open national cemetery or at any private cemetery. The Navy will defray all or part of the expenses. If the remains are consigned directly to a national or other federal cemetery, all necessary expenses incident to burial are paid by the government, and, therefore, no allowance is made to the next-of-kin. If the remains are consigned to a funeral director before interment in a national cemetery, up to $75 may be allowed for services not duplicating those furnished by the government. When interment is in a private cemetery, the Navy will allow further expenses of funeral and burial up to $125. Application for burial allowance should be made to the Chief of the Bureau of Medicine and Surgery, Department of the Navy, Washington 25, D. C.

Headstones or gravemarkers will be furnished for unmarked graves of men who have died in service. If the Navyman is buried in a private cemetery, application must be made to the Office of the Quartermaster General, Department of the Army, Washington 25, D. C. If interment is in a national cemetery no application is required.

A *flag*—the U. S. national ensign—is provided to drape the casket and is presented to the next of kin. If, however, delivery cannot be made in time for the burial service, the next of kin may receive a flag by writing to the Bureau of Medicine and Surgery, Department of the Navy, Washington 25, D. C. Flags for men buried outside the continental United States may be obtained from the VA.

Burial in a *national cemetery* is open to Navymen who die on active duty or after separation, or who served in peace or war under honorable conditions during their last period of service. Also eligible are certain citizens of the U. S. who served in allied forces, as well as a wife, husband, widow, widower, minor child—and—if authorized by the Secretary of the Army, who administers such cases—an unmarried adult child. Application should be made to the Superintendent of the national cemetery in which burial is desired.

important papers

MANY OF THE PRECAUTIONS you have taken to protect your family can be completely lost if, at this point, you neglect a few additional steps.

Here are some matters you should think about: Do you know where all your important papers are? Does your wife? Are they in a safe place? If you or your wife were in an accident or seriously ill, would these documents be readily available to the other? Have you taken the necessary legal steps to safeguard your interests?

Don't wait for a more convenient time to meet your responsibilities. That time will never come.

Have You Made a Will? By executing a will you are assured that your property will be divided and administered according to your preferences, instead of as some court may decide.

This is especially important for the Navyman who may, because of circumstances connected with his military service, live in one state, establish residence in another, and own property in still a third state.

After making your will, it must be signed in the presence of witnesses to make it legally valid.

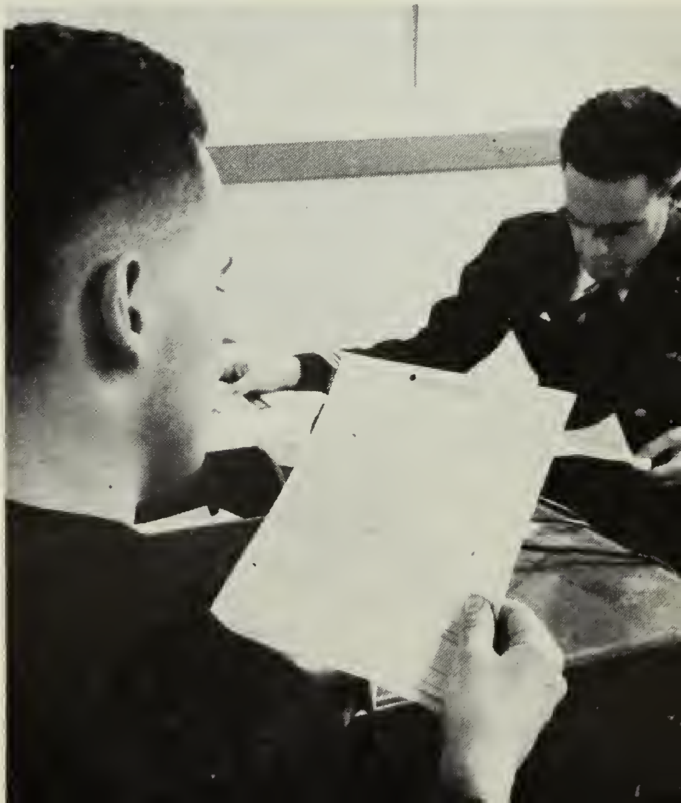
Take care in selecting your witnesses. They must be of sound mind, of legal age, and preferably younger than you (on the assumption that they will outlive you). Three witnesses are a safe number—in some states only two witnesses are necessary, others require three. Relatives usually don't make the best witnesses. Sometimes it is advisable to use as witnesses the attorney who draws up your will and the person designated executor of your estate, provided they are not mentioned in the will. A beneficiary is not acceptable as a witness.

Some states require the individuals who witnessed the will to be present at probate (determining the legal proof of the will).

A Power of Attorney is a convenient legal device you may wish to adopt and grant to a reliable and trustworthy person if you have financial and business transactions that must be managed while you are overseas or on board ship. This person can then act in your name and legally handle your affairs. It is advisable for you to discuss this subject with a legal officer. (For more details see sample box on page 79.)

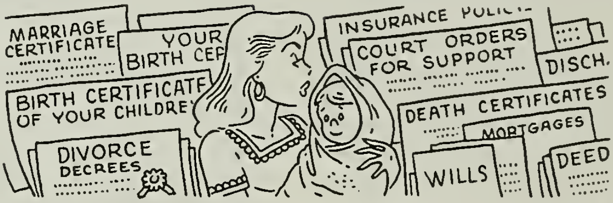
Record of Emergency Data *(DD Form 93-1)*—Is your DD Form 93-1 up to date? The purpose of this form is to insure up-to-date information for use in the event of death or serious illness or injury. This becomes a part of your service record when you first enter the Navy. It is one of the most important papers you will be required to complete during your career. It provides information concerning:

- Person to be notified in case of emergency.
- Person to receive six months' death gratuity or unpaid pay and allowances.
- Person (including commercial insurance companies or banks) to receive special allotment if you become



missing in action, or are in any way prevented from returning to naval jurisdiction.

- Names of commercial insurance companies to be furnished a certification of casualty.



This form should be filled out with great care and should be kept up to date. Carelessness, incompleteness of the form, or lack of understanding may result in needless delay or failure to carry out your wishes in case of an emergency or in the event of your death. As a result, your dependents may be faced with unnecessary hardship if your DD Form 93-1 is not accurate and up-to-date. Here are the occasions when you should fill out a DD Form 93-1:

- When you first enter the service.
- When you reenlist.
- If you are recalled to active duty.
- If you are a Naval Reservist, upon being ordered to extended active duty.
- When you are promoted from enlisted rating to officer rank.
- Whenever a change occurs in the status of your dependents or beneficiaries or persons to be notified in case of an emergency.
- Change in the name of the person designated to receive death gratuity or unpaid pay and allowances.
- Change in dependents to receive the special allotment of pay if you are in a missing status.

List all insurance policies in force on your DD 93-1. The Chief of Naval Personnel will automatically furnish certification of casualty (NavPers 2059) to the insurance companies named in the event of your death.

See your personnel office about a change in your form.

Important Documents You Should Have

Here's a brief check list of the important documents you should have at your fingertips as evidence of your entitlement to survivor's benefits:

- Your birth certificate, and one for each member of your immediate family.
- Naturalization papers (if not born in the U. S.)
- Marriage certificates (including former marriages of you or your wife).
- Court orders pertaining to support and custody of your legal dependents (including your or your wife's children by a former marriage, or adopted children).

LAST WILL AND TESTAMENT

....
(Name)

I, ..., now residing in
(Name)

......................................, ...,
(City or town) (State)

a legal resident of ....,
(City or town)

.... being of full age and of sound and disposing mind and memory, do hereby make, publish and declare this instrument to be my last Will and Testament, hereby expressly revoking all former wills and codicils by me heretofore made.
(State)

FIRST: I direct the payment of all my just debts and funeral expenses as soon after my demise as shall be convenient.

SECOND: I give, devise and bequeath to my wife, ...
(Name of wife)
all of the property which I possess at the time of my death or to which I may be entitled, real, personal and mixed, and of every kind whatsoever and wheresoever situated absolutely and without restriction, knowing that she will make adequate provisions for the welfare and education of my minor children.

THIRD: In the event of the death of my wife, ...
(Name of wife)
prior to my decease, or should my wife and I meet death at or about the same time or as a result of the same cause, then and in that event I give, devise and bequeath, absolutely and without restriction, all of the property which I possess upon my death or to which I may be entitled, real, personal and mixed, and of every kind whatsoever and wheresoever situated, to my
....
(Name of child or children)
including any children hereafter born of this marriage, equally, share and share alike.

FOURTH: I appoint my wife, ..., guardian
(Name of wife)
of the person and property of my ....
....
(Name of minor child or children)
and as substitute guardian I appoint ....
(Name of substitute guardian)

FIFTH: I nominate, constitute and appoint my wife, ...
(Name of wife)
executrix of this my last Will and Testament, and as substitute executor I appoint ....
(Name of substitute executor)

SIXTH: I hereby give my said executrix and substitute executor, respectively, full power and authority to sell (at public or private sale, for cash or credit, and to mortgage, lease and convey, any part of my estate, both real and personal, at such time and upon such terms and conditions as either may deem best.

SEVENTH: It is my desire that the said guardian, substitute guardian, executrix and substitute executor shall serve without bond or surety or security.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my seal at ....,
(City or State)
this..........day of.........................., 19.....
....(SEAL)
(Name of testator)

The foregoing instrument, consisting of ....
(Number of pages)
pages, including this page, was on the day of the date thereof, signed, sealed, published and declared by ....
....................................., as and for his last
(Name of testator)
Will and Testament, in the presence of us, the undersigned, who at his request and in his sight and presence, and in the sight and presence of each other, have hereunto subscribed our names as witnesses, and we hereby certify that at the time of the execution hereof we believe the said testator to be of sound and disposing mind and memory.

......................residing at.................
(Name of witness) (Address)

......................residing at.................
(Name of witness) (Address)

......................residing at.................
(Name of witness) (Address)

POWER OF ATTORNEY

(sample)

KNOW ALL MEN BY THESE PRESENTS, That I,.............
....,
rate or rank........................presently on active duty in the U. S. Navy, residing in the city of..................,
County of.................., State of.................
do hereby constitute and appoint.........................
of ....,
my true and lawful attorney for me and in my name, place and stead:

To lease, let, take possession, bargain, sell, assign, convey, pledge, mortgage and encumber, repair, insure and generally manage, any and all property, both real and personal, which I own, or may hereafter acquire from any source; to sign, execute and deliver any and all legal documents in connection therewith, and in all ways and in every way to deal with all property real and personal which I may at any time hereafter own, and with all rights or interest at any time owned or possessed by me with respect to any such property, and with all or any part of such property, rights, and interests, in every and all lawful ways in which I could myself deal with such property, rights, and interests, and each part thereof. To convey, waive, release and relinquish all and every dower rights, all and every homestead estates, and all and every rights under and by virtue of the homestead exemption laws. To deposit any monies received from any source whatever for me, and in my name with any bank, and to draw and deliver checks in my name against said monies and any other monies there deposited in my name or to my credit; to endorse, discount, sell, assign, negotiate and extend upon such terms as my attorney may deem best, all checks, drafts, notes, bills of exchange, trade and bankers' acceptances, and other negotiable or non negotiable papers, payable to me or to my order; and to accept and pay any note, draft, check trade acceptances or bills of exchange drawn upon me in relation to said matters; to sell, transfer, and assign all and any stock, or certificates thereof, standing in my name, and to collect all dividends, coupons and interest on any stock, bonds, or other securities now or hereafter owned by me; to ask, demand, sue for, recover, collect, settle, compound, compromise and adjust, by payment or otherwise, any and all debts, claims or demands due or become due to me or against me, and to make, give and execute full release, acquittance or other discharge for the same, whether under seal or otherwise; to execute vouchers in my behalf for any and all allowances and reimbursements properly payable to me by the United States; to take possession and order the removal and shipment of any of my property from any post, warehouse, depot, dock or other place of storage or safekeeping, government or private; to execute any forms which may be necessary to effect an allotment of or deduction from my pay and allowances, to execute any form which I may be required to execute in connection with obtaining dependency allowances under any authority statutory or otherwise; to do all things necessary concerning any insurance policies, including the right to change beneficiary.

I do hereby give full power to perform all and every act and thing whatsoever requisite and necessary to be done in and about my affairs as full to all intents and purposes as I might or could do if personally present at the doing thereof, with full power of substitution or revocation, hereby ratifying and confirming all that my said attorney substitute shall lawfully do or cause to be done by virtue hereof:

I HEREBY DECLARE that any act or thing lawfully done hereunder by my said attorney, shall be binding on myself and my heirs, assigns, legal and personal representatives. I hereby ratify all that my attorney may do in the premise by virtue of this Power of Attorney, which shall remain in full force and effect until written notice of its revocation, signed by me, shall have been received by the grantee herein.

IT IS MY FURTHER INTENTION that all express words and terms, used herein granting powers and rights, be construed in their broadest sense to include all synonymous terms and implied powers thereunder.

IN WITNESS WHEREOF, I have hereunto set my hand and seal this........day of......................., A.D., 19.....
....(SEAL)

IN THE PRESENCE OF:
....
....

STATE OF ss.
COUNTY OF

BE IT REMEMBERED, that on the.......................
day of.................................A.D., 19....,
personally came before me the above-named...............
......................................, to me known to be the person who executed the foregoing letter of attorney, and acknowledged the same to be his free and voluntary act and deed, for the uses and purposes therein mentioned.

....
Notary Public for

MY COMMISSION EXPIRES
....

- Divorce decrees of both you and your wife.
- Death certificates of children, former wife or former husband of your wife.
- Deeds and mortgage documents.
- Insurance policies.
- Bank accounts, Savings Bonds, securities.
- Wills.
- Power of attorney.
- Proof of service.

Keeping Your Papers Safe

You should make every effort to retain the original of all of these documents. It is advisable to have plenty of photostatic copies certified by the custodian of these records. Photostatic copies may be made of these documents (*except* naturalization papers. If you are a naturalized citizen and have to verify your citizenship to a state or federal agency, such verification may be obtained by applying to the Immigration and Naturalization Service. Don't send original naturalization certificate).

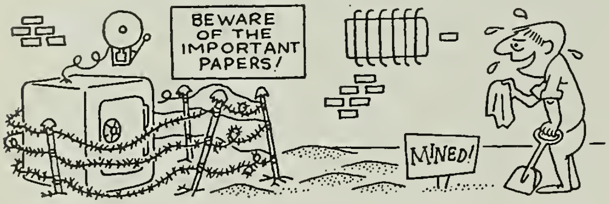
You'll find that photostatic copies of the other documents will prove valuable. Many of the agencies to which a Navyman or his dependent applies must take simultaneous action, and cannot do so if they have to wait until some needed document is released by another agency considering another claim.

These documents you should have are obtained from various sources. If you are unable to procure the documents or copies of the documents you need, your legal officer will be able to advise you as to what evidence may be substituted. It is no longer necessary for your dependents or next of kin to request a statement of service if you die while on active duty. Upon request of the agency handling your survivors' claims, the specific service or medical data is furnished by the Bureau or by BuMed. Your County Clerk or such official can provide certificates of marriage, deeds, mortgages and court orders. Adoption and birth certificates may be obtained from the Vital Statistics and Welfare Department of the state concerned.

Important Papers Should Be Filed For Safekeeping—Are all your important documents stowed away in a safe place? A safe deposit box, with the right of entry given to your wife or other trusted individual, is one of the safest places to keep important papers.

Depository for Savings Bonds—Have you thought of having your Savings Bonds placed on deposit with the Navy's Safekeeping Depository? If you buy U. S. Defense or Savings Bonds through payroll deductions, you may ask the Navy to store them for safekeeping at the Navy Safekeeping Depository, Cleveland, Ohio. Requests for information or for the release of bonds on deposit should be addressed to the Commanding Officer, U. S. Naval Finance Center, Cleveland 14, Ohio.

Listed below are the benefits to which your estate or dependents may be entitled in the event of your death, the documents your wife must produce to receive them, and to whom the documents must be sent:


BEWARE OF THE IMPORTANT PAPERS!
MINED!

Documents for VA Compensation or Pension—In the event of a Navyman's death "in the line of duty" while on active duty, or in the event of the death of a person with a service-connected disability, his widow may be entitled to a Veterans Administration Compensation or Pension, plus allowances for children (see pages 74-75).

To qualify, she must present the following documents:

- Certification of your death (obtained from Casualty Branch, Bureau of Naval Personnel, Navy Department, Washington 25, D. C.), provided directly to governmental offices having cognizance over settlement of survivors benefits.
- A certified copy of the public record of marriage.
- If either you or your wife were previously married, a certified copy of public record of death of former wife or husband, or a copy of court decree of divorce or annulment of any prior marriages.
- Birth certificates of children under 18 years of age.
- Certified copy of public records of your birth (if dependent is your mother or father).

These documents with a claim for the death compensation or pension, should be sent to: Director, Dependent Claims Service, Veterans Administration, Washington 25, D. C.

Papers for Six Months' Death Gratuity—No documents are required for gratuity pay (see page 74) to a designated widow unless either she or you had previously been married, or when there is no official record of the marriage. However, to receive immediate payment the following information should be available to your wife and/or local command:

- Your file or service number and rank or rate.
- Activity where serving at date of death.
- Name and address of your wife.
- Statement of circumstances requiring immediate payment.
- Date of death.

The necessary forms are forwarded, immediately following the official report of death, to the dependents who are believed to have entitlement to gratuity pay.

Return the documents to Chief of Naval Personnel, Casualty Branch, Washington 25, D. C.

Claim for Unpaid Pay and Allowances—A claim form is forwarded by the Casualty Branch to your designated beneficiary or next of kin, as noted on DD Form 93-1. (More information may be found on page 75.)

Any Commercial Insurance policies you may carry will require at least: The policy itself, proof of death, birth certificate and marriage certificate.

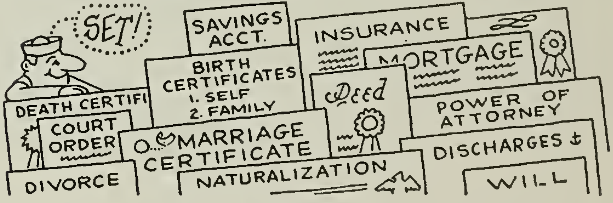
Claims for Social Security Benefits—The documents necessary to prove eligibility for Social Security benefits (discussed on pages 61-67) are:

- Your birth certificate or proof of your date of birth (i.e., baptismal certificate, Bible record, etc.).
- Your wife's birth certificate or proof of birth.
- Birth certificates of minor children.
- Certified copy of marriage certificate.
- Social Security number.

These documents should accompany the claim to the Social Security Board, Candler Building, Baltimore 2, Md., or preferably to your local Social Security Office. The location of local offices may be obtained from any U. S. Post Office.

Claims Under Survivor's Annuity Plan—This is applicable to the survivors of retired Navymen who, under the Uniformed Services Contingency Option Act, have participated in one of the options of the annuity plan by accepting reduced retirement pay, and thus have established a monthly annuity payable to their dependents. (Details on page 59.) You execute your annuity option on form NavPers 591, and should keep your copy of the form with other important papers.

Claims for Other Benefits—Here are some other less tangible benefits to which your widow may be entitled and the documents needed to prove eligibility: *U. S. Civil Service preference, Navy medical care, Commissary and Navy Exchange privileges, free transportation of household effects, eligibility for G. I. Bill under the WW II G. I. Bill, dependents travel allowance.*



The documents needed for the above benefits are:

- Marriage certificate.
- Birth certificate (of dependent children).
- Death certificate.

Does your wife have ready access to your documents or, at least, know where they are kept? Be sure your family knows where these papers are and what to do with them. Be sure your dependents understand how your papers will help the Navy-wide Casualty Assistance Calls Program to help them (see page 73).

Keep this in mind—experience has shown time and time again that almost invariably the confusion and delay in helping the survivors of a serious disaster have been caused by one factor—the records concerning the personal lives of the Navymen were not complete. Unless you take care of your personal records some one else will have to guess at your intentions concerning your loved ones if you become a casualty.

The United States Navy

Guardian of our Country

The United States Navy is responsible for maintaining control of the sea and is a ready force on watch at home and overseas, capable of strong action to preserve the peace or of instant offensive action to win in war.

It is upon the maintenance of this control that our country's glorious future depends. The United States Navy exists to make it so.

We Serve with Honor

Tradition, valor and victory are the Navy's heritage from the past. To these may be added dedication, discipline and vigilance as the watchwords of the present and future. At home or on distant stations, we serve with pride, confident in the respect of our country, our shipmates, and our families. Our responsibilities sober us; our adversities strengthen us.

Service to God and Country is our special privilege. We serve with honor.

The Future of the Navy

The Navy will always employ new weapons, new techniques and greater power to protect and defend the United States on the sea, under the sea, and in the air.

Now and in the future, control of the sea gives the United States her greatest advantage for the maintenance of peace and for victory in war. Mobility, surprise, dispersal and offensive power are the keynotes of the new Navy. The roots of the Navy lie in a strong belief in the future, in continued dedication to our tasks, and in reflection on our heritage from the past. Never have our opportunities and our responsibilities been greater.

ALL HANDS the Bureau of Naval Personnel Information Bulletin, with approval of the Bureau of the Budget on 23 June 1955, is published monthly by the Bureau of Naval Personnel for the information and interest of the naval service as a whole. Opinions expressed are not necessarily those of the Navy Department. Reference to regulations, orders and directives is for information only and does not by publication herein constitute authority for action. All original material may be reprinted as desired if proper credit is given ALL HANDS. Original articles of general interest may be forwarded to the Editor.

DISTRIBUTION: By Section B-3203 of the Bureau of Naval Personnel Manual, the Bureau directs that appropriate steps be taken to insure that all hands have quick and convenient access to this magazine, and indicates that distribution should be effected on the basis of one copy for each 10 officers and enlisted personnel to accomplish the purpose of the magazine.

The Bureau invites requests for additional copies as necessary to comply with the basic directive. This magazine is intended for all hands and commanding officers should take necessary steps to make it available accordingly.

The Bureau should be kept informed of changes in the number of copies required.

The Bureau should also be advised if the full number of copies is not received regularly.

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TAFFRAIL TALK

As you should be able to see from this roundup, the Navy really does "take care of its own." However, you're probably aware that the Navy isn't always a land of milk and honey.

For instance, sea duty may give you the benefits of a long, restful ocean voyage, but your ship might not be what you could honestly call a "floating palace." The education and training you received in boot camp may have taxed your feet more than it did your brain. You may have gotten blisters, bruises and backaches while reaping the benefits of the Navy's athletic programs. You may have battered your fingers while taking advantage of the Navy's hobbycraft facilities. You may have suffered from eyestrain while watching some Hollywood lovely perform in a movie brought to you through the courtesy of the Fleet Motion Picture Service. Or, you may even have discovered that sometimes your pay won't quite reach from one payday to the next.

We don't deny that once in a while, "Navy life can be unbeautiful," and on such occasions, it's easy to take the attitude that, "If I were a civilian things would be different."

But here at ALL HANDS we're pretty busy trying to keep you abreast of changes which affect—and improve—your Navy career: pay and allowances, social security, advancement, annuity, education and training—plus the latest information on such things as housing and medical care for the Navyman's dependent wife and children.

We're impressed with what the Navy offers. And after going through this issue you'll agree with us.

Admiral Holloway has pointed out that "the career Navyman of today is not only a fighting man, but also a family man"—and that Congress, the Department of Defense, the Navy and the entire nation have recognized this fact. The Chief of Naval Personnel suggests that you study this issue carefully, discuss it with your family, and take advantage of the information it offers.

Now we'd like to name a few names, of people who helped us greatly in putting out this issue.

When Admiral Holloway authorized the publication of this rights and benefits issue, we consulted with RADM Craig, the Deputy Chief of Naval Personnel, and with his administrative officer, Mr. C. B. MacLean, concerning business details and distribution. Then we turned to CAPT L. C. Heinz, administrative aide, who followed us along each step of the planning, and aided us with over-all suggestions.

This was an "all hands evolution." We called upon Walt Seewald, as we have done so often before, for photographic assistance. And Mrs. M. E. Gregory, quietly smoothing our path of publication needs, gave us assistance at every turn. The Personal Affairs Division of this Bureau, under CDR R. H. Weller, checked and rechecked information, as did cognizant desks in BuSandA, and others throughout BuPers.

On our own staff, we should mention Chief Journalist H. George Baker, JO1 Barney Baugh, Jerry Wolff, for writing; DC1 Tom Patrick and SN Hugh Bradshaw for their illustrations; PN3 Joe Eagen, SN Del Cass and Virginia Gibson for proofing, routing, checking, and help in research and layout. Our layout assistant, Charles A. Robertson, gave yeoman aid to the managing editor and editor.

As we have said, this issue is the work of many people. We hope you find it helpful.

The All Hands Staff

your navy career

information on rights and benefits for you and your family

ALL HANDS

THE BUREAU OF NAVAL PERSONNEL INFORMATION BULLETIN

This magazine is intended for 10 readers. All should see it as soon as possible. PASS THIS COPY ALONG

JUNE 1957

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ALL HANDS

THE BUREAU OF NAVAL PERSONNEL INFORMATION BULLETIN

JUNE 1957 Nav-Pers-O NUMBER 485

VICE ADMIRAL JAMES L. HOLLOWAY, Jr., USN
The Chief of Naval Personnel

REAR ADMIRAL K. CRAIG, USN
The Deputy Chief of Naval Personnel

CAPTAIN O. D. FINNIGAN, Jr., USN
Assistant Chief for Morale Services

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• FRONT COVER: AND AWAY WE GO — Happy sailors of carrier USS *Franklin D. Roosevelt* (CVA 42) descend ship's ladder to liberty launch and good times ashore in Rio.

• AT LEFT: WIDE-AWAKE—USS *Forrestal* (CVA 59) cuts a wide wake as she steams through the sea. The mighty carrier is now pulling duty with the Sixth Fleet in the Mediterranean.

• CREDITS: All photographs published in ALL HANDS are official Department of Defense Photos unless otherwise designated.

Readying Crews for Atomic Subs

A HANDFUL OF U. S. NAVYMEN who will sail tomorrow's nuclear Fleet are learning the tricks of their trade today in one of the world's most unique training programs.

The center of this activity is one where you would least expect to find seafaring men. It's the Atomic Energy Commission's Naval Reactor Facility, located within the AEC's 440,000-acre National Reactor Testing Station at Arco in the desolate, butte-studded desert of southeastern Idaho.

This facility, 600 miles from the ocean and 60 miles from the nearest town, is the training center for the officers and enlisted men who will operate the prototypes, as well as the actual engineering plants, of the Navy's present and future nuclear powered submarines and surface ships.

It is here that the world's first practical nuclear power plant was built and tested. Designated S1W, this was a full scale working model of the reactor that today propels USS *Nautilus* (SS(N) 571).

Today, this same reactor is being used for advanced testing and as a classroom for Navy and civilian trainees.

As a test facility, it is used to check advanced design equipment, as a prototype for current nuclear projects, and as a means of obtaining data for the Navy's dream ships of tomorrow.

As a classroom, it's a weirdy. You'll never see another like it. In effect, it consists of two hull sections of a submarine built to the exact size and dimensions of *Nautilus.*

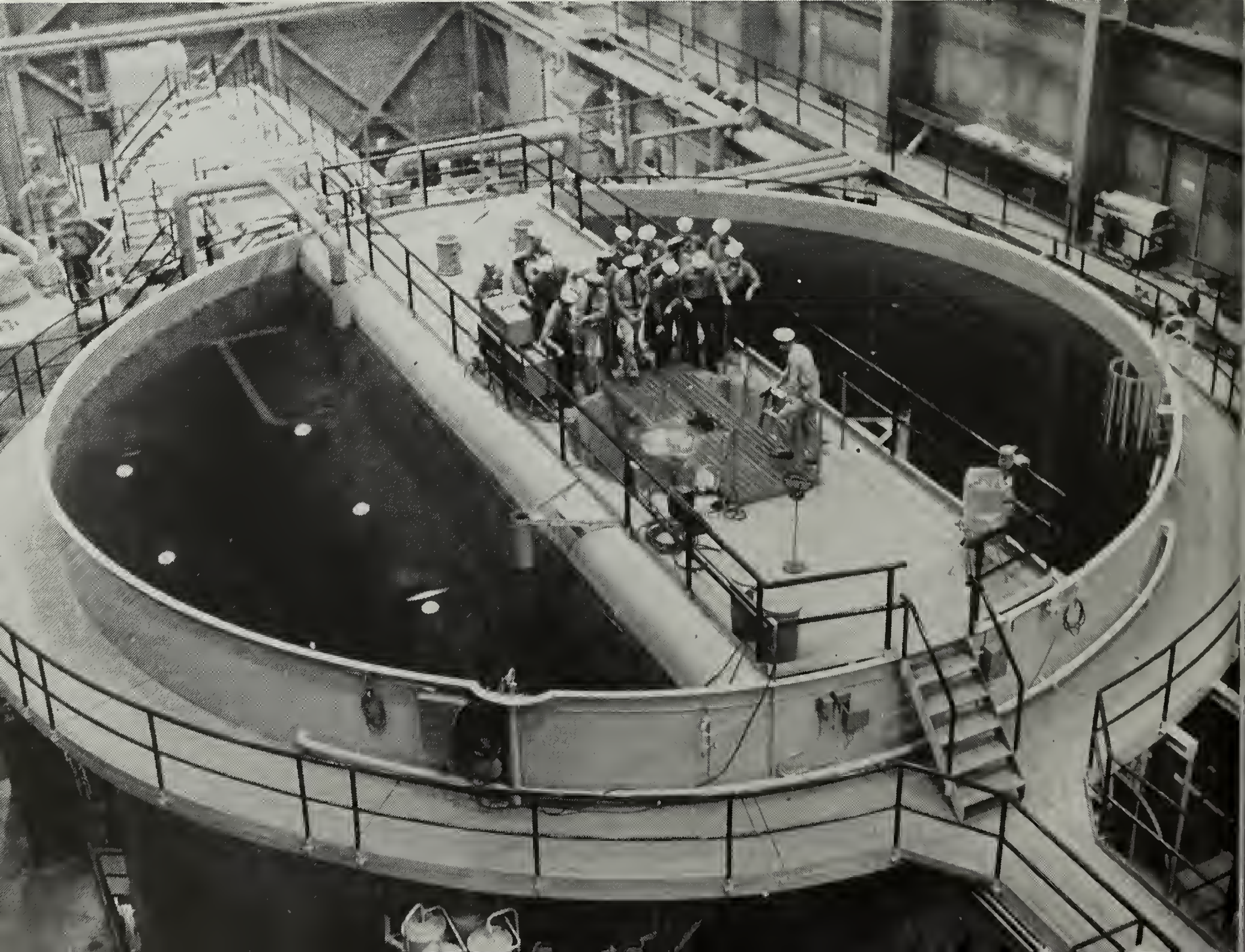
Even in the middle of the desert, a sub would not be complete without an ocean, so S1W has its own. It is a 50-foot wide, 40-foot deep "sea tank" that holds some 385,000 gallons of water. The tank surrounds the reactor compartment of the "sub's" hull section to simulate sea condition. The engine room extends beyond the tank and the propeller shaft ends in a "water brake" instead of a propeller, so that the engine has something to work against. All that is lacking to lend reality are barnacles and watermelon rinds.

The radioactive portion of the plant—the hot uranium furnace and heat exchanger in which the steam is generated—is located in the reactor compartment. The engine room proper holds the balance of the propulsion equipment, such as turbines, condensers, gears and motors.

This hull, with its maze of pipes, wires, motors, valves and complicated instrumentation, is the campus of Arco U.

Here, the Navy students get on-the-job training. They work side by side with scientists and engineers, nuclear experts from the AEC, and technicians from the Bureau of Ships. The students are training for eventual duty aboard one of the

ON TOP of prototype of *USS Nautilus* students study its reactor compartment. Surrounding sea tank adds realism.



nd Ships

many nuclear powered ships now in commission, under construction or on the drawing board. (In addition, they are accompanied by some civilian trainees who will use the technology and experience gained on the submarine prototype to operate the nation's first civilian power plant now being built. It is scheduled for completion later this year.)

LET'S ASSUME THAT you are one of the bright young Navymen who who has decided to make nuclear power your specialty. Your application has been approved. Career-wise, the sky is the limit, but what does the immediate future hold for you? What is Arco U like?

You won't find out by personal observation for some little time. Before you report for operational training, you must have completed 21 weeks of academic study at either the submarine or surface basic nuclear power schools. The basic submarine course is conducted at the U. S. Naval Submarine Base, New London, Conn. (See ALL HANDS, April 1956.) Surface ship trainees receive their basic schooling at the Naval Nuclear Power Training Unit, located within the grounds of the Naval Reactor Facility at Arco. (See page 7).

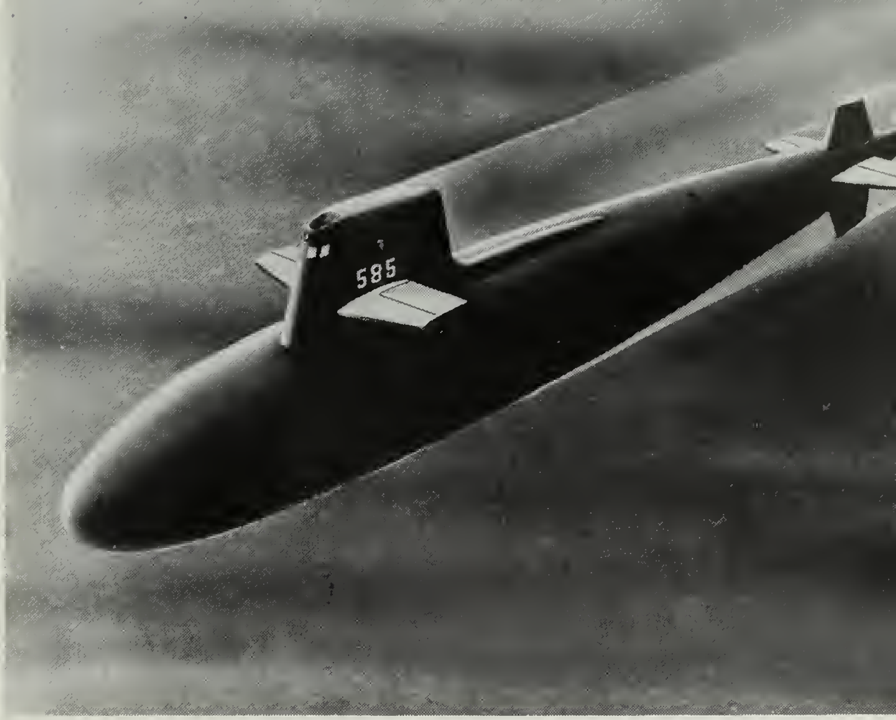
The surface trainees are using the S1W reactor only as a temporary measure. As soon as the land prototype of the nuclear powered surface ship—to be known as A1W—is completed, the surface lads will move to their own "campus." It will be a full scale working model, similar to the S1W prototype of *Nautilus.* It is being constructed near the basic surface school at the present S1W site and it is expected that some men will commence training in it within the next few months.

No matter what your rank or rate, you will be assigned to one of four operation shift crews as soon as you start your schooling. Each crew will work and study together for at least six months. Although in a training capacity, you and the other members of your crew will actually operate the plant and be responsible for its safety.

Your crew will be headed by an OOD, known here by the lubberly term "shift supervisor." He will be assisted by the Engineering Officer of the Watch, but here he will be called a "chief operator." He may be an officer, enlisted man or a civilian representative of the company which built the reactor. He is responsible for the safe and proper operation of the plant.

Also assigned to each crew are a reactor engineer and a training engineer. The RE is in charge of the reactor or atomic furnace during start-ups, shut-downs and critical operations. (To go "critical" is a bit of technical jargon which means that the plant is actually operating under nuclear power.) The TE is responsible for the proper instruction, training and qualification of all trainees assigned to his crew.

In addition to the trainees each crew has a number of qualified enlisted operators assigned. The roster



FLYING A SUB—Bow diving planes of Navy's newest nuclear submarine *USS Skipjack,* SS(N)585, now being built will be on the conning tower.

A-STUDENTS—J. N. Robertson, HM1, USN, takes radiation survey as LCDR D.P. Brooks prospective nuclear sub-skipper leaves lower reactor compartment.

WHEN NUCLEAR powered guided missile cruiser, *USS Long Beach*, hits the water, surface trainees at Arco U will have the know-how to man her reactor.

usually includes one ET or IC who is designated as a Reactor Technician; several EMs, one of whom is a reactor compartment operator, and another, the operator of the electrical section of the power panel; and several EN or MMs. They are the upper engine room, lower engine room, and over-all engine room operators. One of them is in charge of both the reactor and engine room compartments.

The crews work in shifts, around the clock, seven days a week. The shifts are rotated every seven days so students and instructor each get an equal share of day and night work. One crew will work the 0800-1600 shift for seven days and then have four days off. On the fifth day, it takes over the 2400-0800 shift for seven days, then has two days free. On the third day, it takes over the 1600-2400 shift for a week. They get a one-day break before they begin the 0800-1600 routine again.

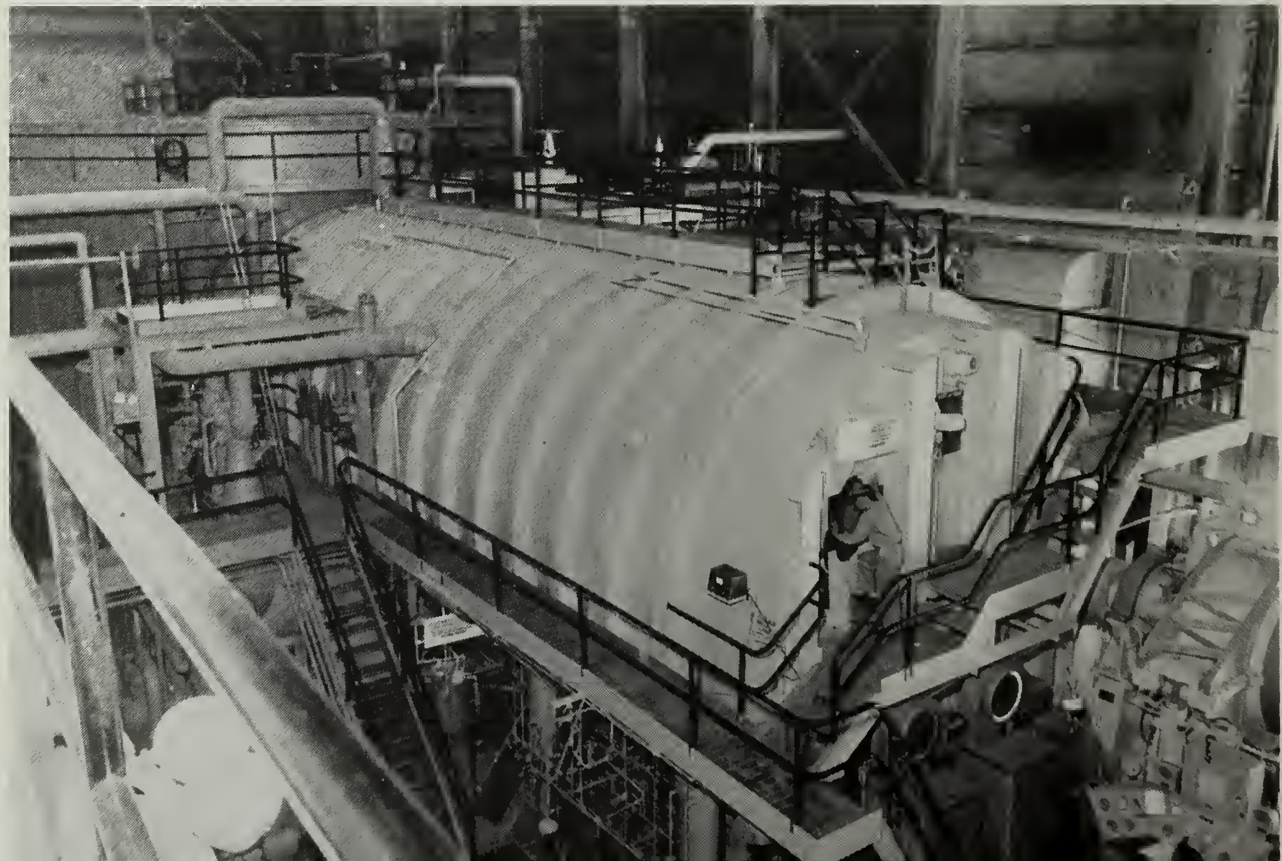
By keeping the plant in operation 24 hours a day, seven days a week, training continues without any interruption. During a normal eight-hour shift, each trainee receives one hour of lectures or classroom training; four hours of watch standing (usually under instruction) at any one of the 13 watch stations; and three hours of on-the-job maintenance training, tracing systems, learning the operation of valves, and similar duties.

While undergoing training, all students—officers, enlisted men and civilians—are treated alike. There's no pulling rank or rate among students or instructors. You'll find chiefs and first class petty officers in charge of operational training crews that include a number of officers. It's not unusual to see an officer and enlisted man, their sleeves rolled up, sweating and covered with grease, struggling with a difficult situation. Or you'll see a small group off in a quiet corner boning up on a text book or helping each other trace down a difficult electrical or piping system.

During the six month's on-the-job training, each student is expected to become a qualified nuclear power operator, acquire firsthand experience and a background adaptable to the engineeering plants of nuclear powered ships. In addition, he must qualify for the specific duties of his rate as well as obtain a familiarity with his allied ratings.

Before you start to qualify, you will be given extensive lectures concerning the S1W site, the hull and floor systems. These lectures, com-

HULL OF A SCHOOL—Inside S1W are the classrooms of Arco U. Here, student enters 'ship' aft of sea tank.



bined with the basic academic background received earlier, give you an understanding and a sense of familiarity of the entire plant operation before you start working with it.

In addition, you will be given a 130-page manual, *The Naval Reactor Facility S1W Operator Training Guide,* when you start your training. This is your "bible." You had better believe every word of it and follow it step by step if you have any hopes of satisfactorily completing the qualifications within your six months' course.

In addition to the operating crew described above, the school has 15 enlisted instructors who are assigned to five three-man shifts. Each instructor crew consists of one EM, one ET or IC and one EN or MM. One member of each of the five instructor crews formerly served on board *Nautilus.* The others are former students who excelled during training and were retained for duty as instructors.

Commanding officer of the Navy's Nuclear Power Training Unit is LCDR E. W. Cooke, USN, a veteran submariner. Although in command of the unit, he's not the senior ranking naval officer assigned to the Naval Reactor Facility.

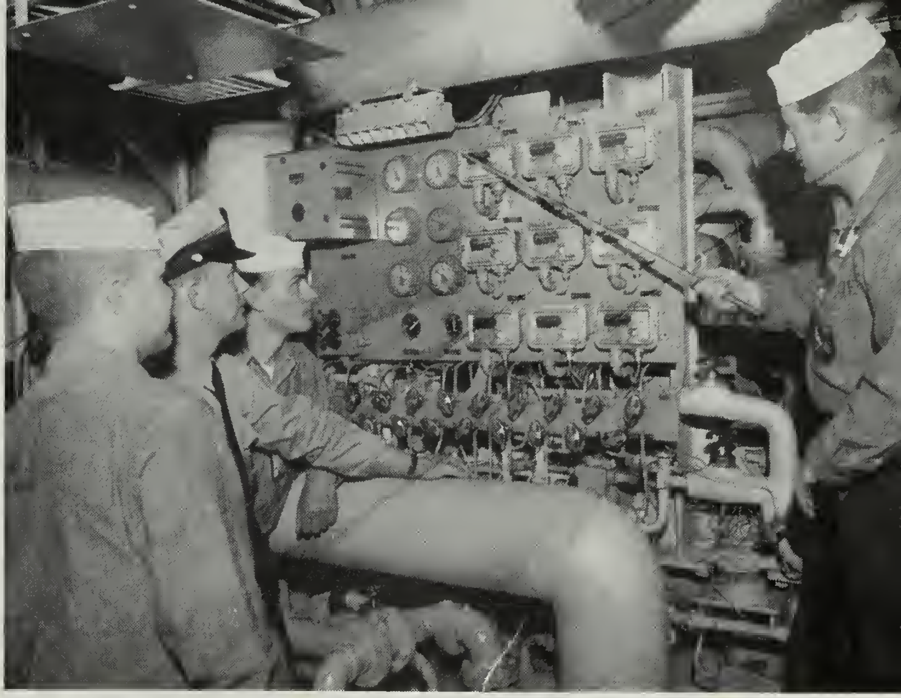
The Facility is but one of the many testing sites located within the AEC's sprawling 440,000-acre National Reactor Testing Station.

What sort of men will you be working with? You'll find that, although they are the cream of the crop, they are also typical Navy career men.

Take, for example LTJG David A. Phoenix, USN, who is responsible for coordinating training at the S1W site. An ex-enlisted man with more than 12 years' service, LTJG Phoenix first came to the Naval Reactor Facility as an EN1 in 1953 as a member of *Nautilus'* pre-commissioning detail.

Shortly after *Nautilus* went into commission, Engineman Phoenix was selected for Officer Candidate School. When he received his commission, he was assigned to USS *Odax* (SS 484) where he requalified in submarines as an officer, before returning to Idaho in April '56.

Mr. Pheonix's assistant and right hand man to the skipper is Chief Engineman "JC" Kerr, USN, a veteran submariner who was one of the first 12 enlisted men selected for the Navy's nuclear program.



DIAL A FOR ATOMIC—Inside A-Sub prototype students study maze of dials, wiring and special gear. *Below:* Student is taught analysis of secondary water.

Chief Kerr, as the senior enlisted man at NNPTU, carries the title of "Chief of the Boat." As such, he has all the responsibility that goes with the tab. He's the undisputed boss, voice of experience and official go-between for the trainees, instructors, staff officers and civilian representatives. Kerr is one of 10 enlisted men who has qualified as a Chief Operator.

When not absorbed with nuclear power, "JC" can usually be found reading up on history. He's an authority on the Civil War as well as atomic power.

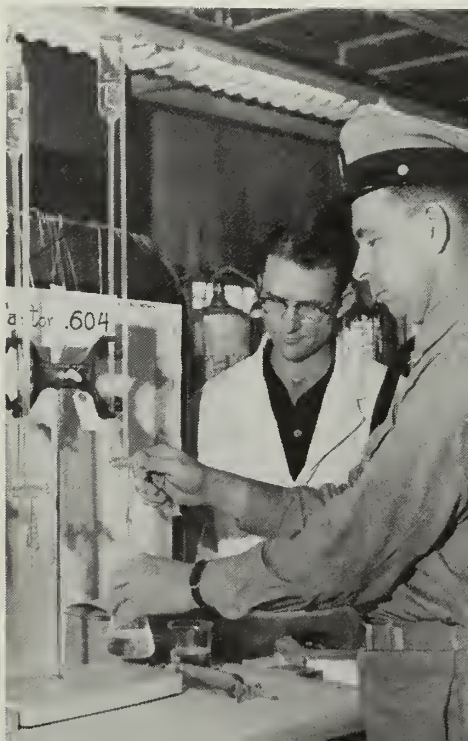
Kerr has been with the nuclear program since 1951. Taking his basic training at Pittsburgh he reported to Idaho in time to help make atomic power history. He was here on 30 Mar 1953 when the prototype of *Nautilus* first went critical. He was also there two months later when the S1W first operated under full power and again when it made a simulated run across the Atlantic at full speed, under submerged conditions.

That was just the beginning for Chief Kerr, however, as in December '53 he went from the prototype to the real thing. He was a member of the pre-commissioning detail of SS (N) 571—the world's first nuclear powered vessel and first true submarine.

Kerr, who has had submarine duty since 1943—four years after he entered the Navy—made five war patrols aboard his first sub, USS *Dace* (SS 247). "I used to think that *Dace* was the best sub in the world," Kerr says. "She was—until *Nautilus* came along.

"I've worked with *Nautilus* from the very beginning, and I'm still amazed with her. They'll never build another boat like her. Sure, they'll come up with new designs, but they'll never build another *Nautilus.* It was the first.

"The SS(N) 571 is undoubtedly the best sub ever built—she is really



a good boat and she has the best officers and best trained crew you'll ever find serving together. Her chow was tops too!—where else can you get nuclear cooked food."

Kerr is married, has three children and owns his own home in the city nearest the site—"near-by" Idaho Falls, some 60 miles away.

You'll meet Chief Engineman Charles W. Brink, (SS), USN. Although he has served in a number of different conventional subs, Chief Brink has never been assigned to a nuclear boat. Yet, he's one of the school's top instructors.

Since being selected for the nuclear program in July '55, Brink has qualified in all 13 watch stations within the S1W hull and also as a Chief Operator. He and Kerr are the only two enlisted men presently assigned to the S1W site who have qualified as Chief Operators.

Brink had so much on the ball while a student that he was immediately selected to remain at the site for instructor duty. He enjoys his job but is looking forward to the day when he can actually serve aboard a nuclear sub. He was recently selected for LDO.

Then there's Frederick O'Brien, ET1, who never had any nuclear training but had duty aboard *Nautilus.* He was aboard doing routine radar and radio work and became interested in the many uses of electronics in connection with nuclear propulsion. He applied for nuclear training, was selected and attended the first basic class at New London before coming to Idaho. Having completed his operational training, he's now filling in as an instructor, and writing training manuals while undergoing advanced, specialized reactor engineer training. He too, can't wait to get aboard a nuclear powered boat—especially *Nautilus*—again.

Another example of the Navymen at the school is 19-year old Gary A. Johnston, ICFN, who is one of the youngest trainees ever to go to nuclear school. He is also one of the first two non-rated men selected for the nuclear program. The other youngest trainee and non-rated man is Imon L. Pilcher, ICFN. They went to boot training together, went on to sub school and are now going through the nuclear training program together.

When Johnston first started sub school he was attending classes in the same building where the first basic nuclear submarine course was being conducted. Being so near, yet so far, he heard all sorts of rumors about the school and decided "it would be a cold day before he'd ever reenlist just for nuclear training."

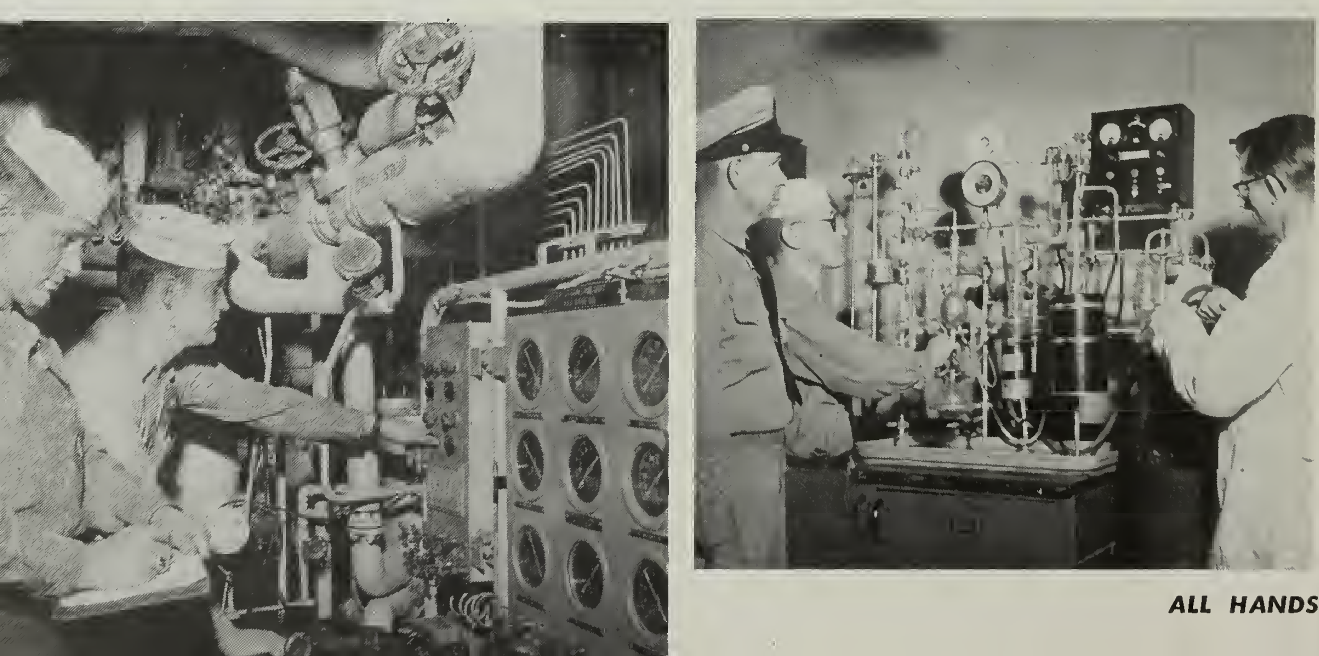
However, upon graduating from sub school—he stood fifth in a class of 250—he knew more about the nuclear program and felt somewhat different. When asked if he would be interested in nuclear training, he accepted without hesitation. He went into the program because at heart he felt that, "he was really getting a chance to work at something with a future." "There's no doubt about it, I found the basic school tough," Johnston said. "But, it wasn't as bad as everyone said it was. I did, however, have to buckle down and study for the first time in my life. When we started school, they gave us a pamphlet saying the school was a challenge even to the brightest student.—Believe me, it was," he added. "I made it though, because I think I had the advantage over a lot of the older students. I was just out of high school and my study habits were still fresh. But on the other hand, the older students had the advantage over me when it came to practical experience."

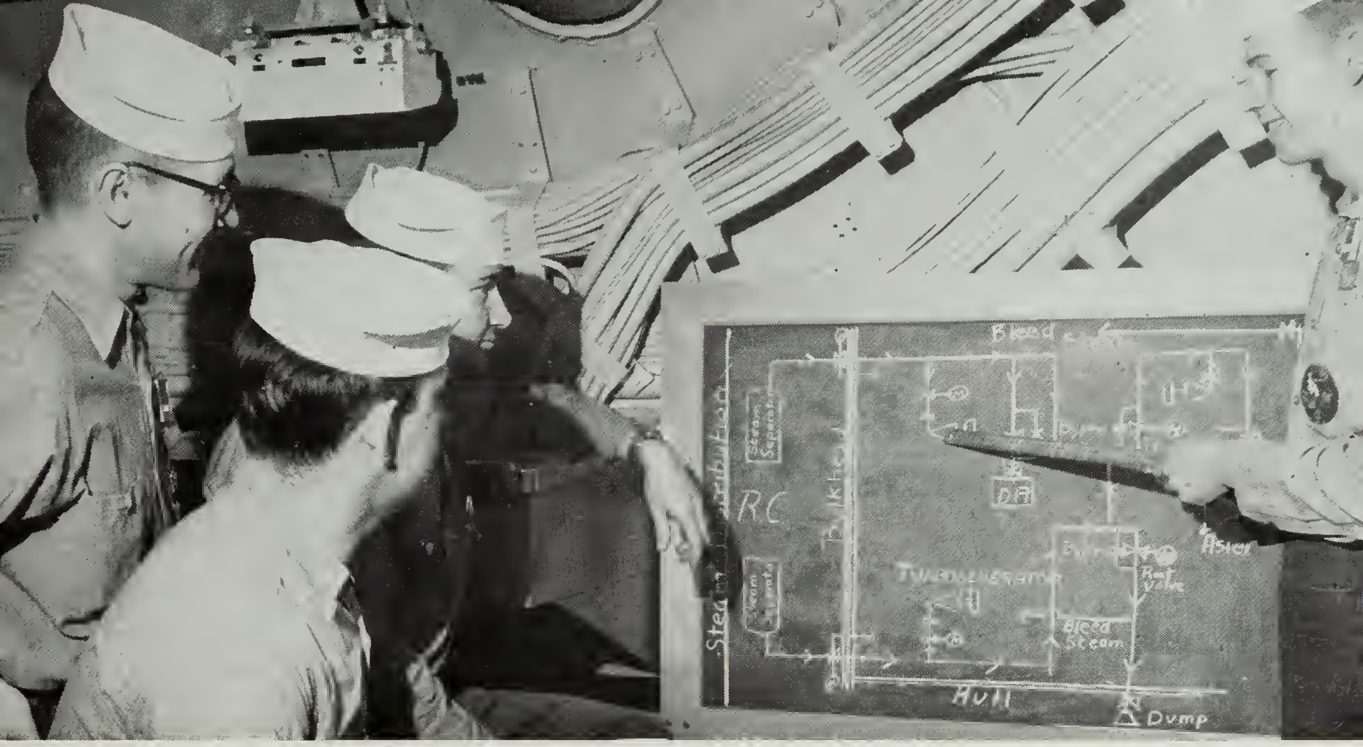
This month Johnston completes the operational phase of his nuclear training. When asked about it, he said, "It's really impressive to piece together all the math, theory and physics we had at basic school. It's unbelievable when you see all of this actually at work. I feel that I was quite fortunate to get into this program. Imagine little ole me, getting in on the ground floor of a project as big as this. Just think," he said as he sat gazing into space, "they have already authorized 14 nuclear subs. What will we have to work with tomorrow?"

Johnston, as young as he is, summed things up pretty well. Men like him, O'Brien, Brink, Kerr and LTJG Phoenix, as well as the other nuclear trainees and instructors, won't have to wait until tomorrow. They're revolutionary sailors—who are a part of tomorrow's Navy, today.

—H. George Baker, JOC, USN

GETTING READY for tomorrow's Fleet today these Navymen have a lot of interesting duty ahead of them.





NAVY'S A-SCHOOLS combine classroom study with work on the reactor. Here, students study steam plant.

Basic Surface Training

Headed for the Nuclear Surface Fleet

KEEPING PACE with its accelerated nuclear shipbuilding program, the Navy, in close collaboration with the Atomic Energy Commission and civilian industry, has developed an extensive training program of vital interest to you.

At present the Navy has two nuclear training programs which offer you a full year of training, and eventual duty with the Nuclear Fleet. They are the nuclear powered submarine and the nuclear powered surface ship programs.

Both of these programs are divided into two phases—basic and operational. The basic portion of the submarine training (see ALL HANDS, April 1956) is conducted at New London, Conn., while the basic surface training, discussed here, is at the Naval Reactor Facility in Idaho. At present all operational training is being conducted at Idaho.

In order to qualify for the nuclear surface ship training—which consists of 21 weeks of basic academic instruction and 24 weeks of on-the-job practical operating experience, you must:

- Volunteer for the program
- Be less than 30 years of age
- Have a minimum score of 55 in GCT, ARI and MATH/MECH
- Be a high school graduate or have GED equivalent
- Be recommended by your CO
- Have a minimum of four years' obligated service or execute an agreement to extend your enlistment or reenlist before being transferred to school
- Be regular USN and of the following ratings: HM1 or HMC; chief, first, second or third class MM, BT, FP, MR, ET, IC, EM, EN and IM.

If you meet these requirements and are interested in the nuclear surface ship program, you should submit a request, via your CO, to ComServLant or ComServPac, as appropriate. For complete details see BuPers Inst. 1540.33 and directives issued by the Service Force Commanders.

Each individual request will be reviewed in this Bureau and applicants will be advised as to the action taken. If you are selected, your CO will get a letter from either the Commanding or Executive Officer of the Naval Nuclear Power Training Unit. Forwarded with this letter will be copies of *Basic Mathematics* by Keller and Zant, and Schram's *Outline of Theory and Problems for Students of College Phyics.*

You'll be expected to complete both of these courses before reporting to school. They are sent to you in an effort to give you some advance knowledge which will enable you to achieve a better undertanding of the theory of nuclear power plant operation that would not otherwise be possible in the six months allotted to the academic portion of the school.

When reporting to the school you will be required to turn in the completed exercises. At the same time, you'll be given a two-hour examination on this material. The results of this exam will determine the section to which you will be assigned during your basic schooling. Student are assigned to sections according to their ability. Those who receive unsatisfactory grades in the initial exam will go into a section slated for preliminary instruction, while those receiving passing grades will go into average or advanced sections. At the basic school an individual is not held back if he has the ability and desire to learn. The more apt students are afforded the opportunity for advanced study in their specialties.

NEEDLED—R. J. Raczek, ETC, keeps eye on needles as he logs radiation monitoring readings at Arco, Idaho.

The over-all aim of the school is to offer a course of instruction designed to give the students a thorough background in the fundamentals of pressurized water nuclear reactors. It calls for a working knowledge of electricity, atomic physics, reactor theory and mathematics, up to and including calculus. All this as well as chemistry, heat, health physics, the use of the slide rule, and systems and components are taught at the basic school.

Here's what the school's CO, LCDR E. W. Cooke, USN, has to say about the 21-week basic course: "The academic portion of this course gives the students a background in subjects related to the nuclear field and nuclear power plant constuction and operation. We concentrate largely on mathematics and physics.

"We provide an over-all course which presents a challenge to each member of the class. The minimum requirements are reasonably high and the maximum requirements are limited only by the man's ability, intelligence, background and desire to apply himself.

"The course, as presently designed, is very comprehensive. (It consists of 720 hours of class room study—156 of math alone, 100 hours in physics, 84 in electricity, 84 in reactor theory, 64 on systems and components, and the balance in chemistry, health physics, use of the slide rule, and 90 hours of specialized 'in-rate' training.) It is somewhat difficult for most students and requires many long, arduous study hours on the part of each trainee. However, the rewards—although not always immediate—are almost unlimited.

"The one pre-requisite for successful completion of this course is proper motivation, including your desire to work, to advance and to accept responsibility. You must be motivated for the nuclear power training program and must have the ability and interest to work 'out of rate' if called upon."

In concluding, the CO adds, "Our goal is that each man shall understand 'plant' operation and at the same time retain the specialty features of his rate. Each facet of the training is equally important. By that, I mean we expect electricians to understand basic principles of steam and machinery and that the men in the mechanical rates understand rudimentary electricity."

NUCLEAR BLOCK HOUSE—The eight-story building that houses the reactor is an unusual looking building. Pipe maze holds water for cooling system.

The Navy's basic nuclear surface ship training school is but a year old. To date, one class has graduated, and the second is due to finish later this month. Thirty-six enlisted men and four officers completed the initial class while 40 enlisted men and four officers are currently learning the tricks of the trade.

The school is staffed by nine civilian professors and six Navy instructors—four officers and two enlisted—all specialists in their particular fields. Its 12 modern lecture rooms, well equipped laboratories and library are located in two 100-by-60-foot buildings which are sandwiched between two, eight-story windowless cement structures. These towering buildings house the full-size operating prototypes of the S1W—identical to the power plant now propelling *Nautilus*—and the A1W—a model of one of the four nuclear reactor plants which will drive the first atomic powered aircraft carrier. (Both atomic and nuclear power mean the same thing—chain reaction caused by neutrons bombarding the atomic or nuclear fuel (uranium) producing energy in the form of heat which is used to make steam. The steam turns turbines and drives the ship's propellers.)

A typical career Navyman, picked at random from the first group of nuclear ship trainees is Keith C. Roberts, MM1, USN. Although only 22 years old, he has five years of naval service behind him.

A graduate of MM and second class diving schools, Roberts served at the Pearl Harbor Submarine Base for three years before reporting for nuclear training. Although not a submariner himself, he was an instructor at the Pearl Harbor escape training tank, where he taught submarine escape procedures to the sailors of the Pacific Fleet Submarine Force.

Roberts applied for nuclear training in December 1955 when the Chief of Naval Personnel issued his first call for volunteers. Roberts received his orders in March '56, and three months later was among the handful of Navymen who inaugurated the Navy's first nuclear surface ship training program.

When applying for the nuclear program, Roberts felt that it was an opportunity to get into something

NUCLEAR NOTES—Navymen in basic phase of nuclear training pay close attention to math problem at hand.

completely new. "It was so new in fact, it hadn't even started when I applied," he said.

"The 21 weeks of basic schooling sure did me a lot of good. I don't know where I could get an education to equal what I got here, and in such a short time," Roberts added. "Before coming to the Naval Reactor Facility I had no 'math' background whatsoever. I didn't know the difference between X squared or X cubed, nor did I even know what a slide rule looked like. Believe me, I know now," he said, shaking his head.

Between long hours of class room study (seven hours a day) and then study at home (at least four hours a night and then some) one can easily become fatigued—mentally as well as physically—and a certain amount of recreation becomes a necessity. "And Idaho is certainly the place for that, especially if you're and outdoor enthusiast like me," said Roberts, who is an ardent hunter and fisherman.

In the very limited time when the trainees are not absorbed with study and nuclear power, you will most likely find them off in the woods or at some quiet mountain stream. Both hunting and fishing are tops in Idaho as the majority of the personnel at the Naval Reactor Facility will quickly testify. During the last hunting season, Roberts and other nuclear trainees who went hunting together, each had bagged a deer within an hour after the season opened.

In addition to deer, there is good elk, mountain goat, pheasant and quail hunting in Idaho too. Nearby Snake, Salmon and Big Lost Rivers offer excellent year 'round trout fishing—"that's hard to beat anywhere." Then, there is Yellowstone and Grand Teton National Parks, both within short driving distance from the school—"What more could anyone ask for?"

Recreation-wise, duty at the Naval Reactor Facility is tops. It's apparent that liberty in the nearby towns is also 4.O as almost every single man reporting to the school gets married before he completes his training. The town-folks, local business men and civic groups treat trainees very well. Relations between the Navy and local communities are extremely good.

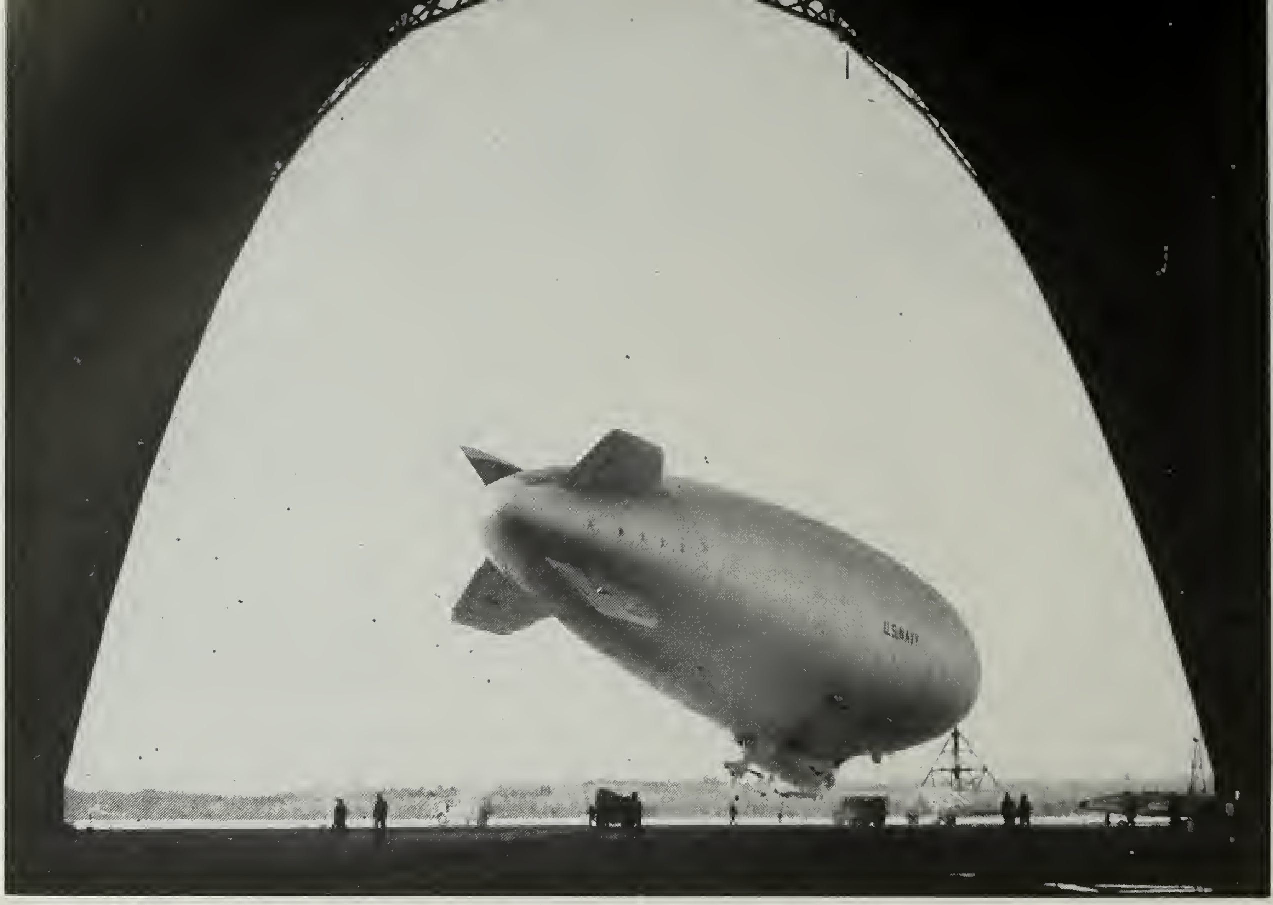
All Naval personnel—including operational and basic trainees at the Naval Reactor Facility—wear civilian clothes. In fact, they are even told to report aboard in "civvies." The dress is very informal with sport shirts and slacks being the accepted uniform of the day.

All officers and enlisted men—married and single alike—live "on the beach." No government quarters or messing facilities are available at the Naval Reactor Facility. Therefore, the single men get an additional $45 per month in lieu of quarters and $3.42 per day for subsistence. The "married-Johns" get their BAQ plus $3.42 per day. Almost all of them live in Idaho Falls, Blackfoot or Pocatello, Idaho—all located within a 60-mile radius from the nuclear training and testing site.

The Navy provides free bus transportation to and from the school. It takes about 45 minutes for the bus ride from the school to Blackfoot, an hour to Idaho Falls and 1½ hours to Pocatello. For those who desire to drive their own cars, traffic is no obstacle. You'll be lucky to pass more than three or four cars going either way, but watch out for the jackrabbits. The area in which the site is located is over-populated with them—according to current estimates there's one jackrabbit for each square foot of land.

—H. George Baker, JOC, USN.

ON THE BALL—Navy students of nuclear propulsion at reactor facility at Arco, Idaho, perform momentum experiment in school's physic laboratory.



MUCH TRAVELED AIRSHIP, *ZPG-2*, is moved out of a hangar preceding take-off for 11-day sky cruise.

Navy's Record-Breaking Blimp

NO WATER FOR A SHOWER. That was the major trouble encountered during the record-breaking flight of a ZPG-2 blimp which took off at NAS South Weymouth, Mass., crossed the North Atlantic, swung down toward the Azores and Portugal, took a look at the coast of Africa and then, in the vicinity of the Cape Verde Islands, headed across the Atlantic to land at Key West, Fla., some 11 days or 264 hours later.

"Just a regular operational flight, but a little longer," according to command pilot CDR Jack R. Hunt, USNR. "We had plenty of water for shaving, cooking and drinking but with all the other comforts, these things still have no effective shower bath."

However, the 14-man crew of BUAer No. 141561 (better known as "Whitey the Snowbird") were willing enough to disregard minor discomforts as they surveyed the records established by the flight:

- For continuous flight under power without refueling by any type of aircraft—264.2 hours (the previous record was 200.2 hours, also set by a ZPG-2 airship in May 1954).
- For distance flown non-stop without refueling by any type of LTA aircraft—9448 miles (the previous record was 6980 miles, set in 1929 by the *Graf Zeppelin.* Airplanes have flown further non-stop, but required in-flight fueling).
- For the world's first non-stop round-trip flight between the United States and Africa by any LTA aircraft.

The purpose of the flight conducted by the Naval Air Development Unit (NADU), was to test and evaluate the all-weather capability of airplanes for use in airborne-early warning and anti-submarine systems. It was a continuation of the Office of Naval Research program last winter during which time five ZPG-2—model airships maintained an early warning station 200 miles off the New England coast for 10 days through the worst period of weather experienced by that area in 75 years—which at times grounded other aircraft and delayed shipping.

During this earlier test period of sub-zero cold, snow, sleet, freezing rain, wind over 60 mph, "severe turbulence" and blinding fog, one airship flew for 32 consecutive hours of these conditions, and another was

GROUND HANDLERS and crew unmast airship on icy field, South Weymouth.

airborne for 56 continuous hours.

Nor was *Whitey* a special, custom-made job. Just a standard ZPG-2, 343 feet long, 76 feet in diameter and with approximately 1,000,000 cubic feet of helium. Its car was 83 feet long, eleven and one-half feet high, with an upper deck in the forward end containing sleeping and kitchen facilities. The power plant was two gasoline engines mounted in an engine room within the car. When desirable, the two propellers can be driven by one engine.

The 200-hour record was equalled when *Whitey* was in the vicinity of the Virgin Islands. By the time the craft had reached a point near the Dominican Republic and north of Puerto Rico the next morning, it had beaten the record of the *Graf Zeppelin* when it went from Friedrichshafen, Germany, to Tokyo, Japan, on the first leg of its around-the-world flight in 1929.

It was at this time that the crew of *Whitey* received the biggest kick of their flight—a warm and friendly message of congratulations from Chief of Naval Operations ADM Arleigh Burke.

With the feeling that life could no longer hold much more for them (except a good hot shower), *Whitey* and her crew of potential Flying Dutchmen drifted north to the Bahamas, loitered off the Florida coast and finally dropped in at Miami.

In a ship-to-shore radio interview with a local correspondent, CDR Hunt reported that boredom was their worst enemy.

"How do you keep from going batty?" was one inquiry.

There was considerable discussion over the answer to this one.

"Some of us here think we've lost that battle," Hunt replied.

"Actually," he added, "We've been getting along quite well. Chow has been fine. We have a good galley, good bunks and plenty of reading material. Everything on board—(even ALL HANDS?)—has been read at least once. We've played cards, chess, checkers. There's been enough duty to keep it from getting too monotonous. We have a 14-man crew and have been standing watch and watch."

Although all of the flight was over water, there were still sights and events to break up the routine. When William S. Dehn, AG1, celebrated his 32nd birthday aboard ship, George Locklear, AM2, who had been designated as ship's cook, broke out the instant cocoa, some sugar and one of the ship's precious eggs, to whip up a birthday cake. A casserole dish was the cake pan and an electric fry pan, the oven.

TEST FLIGHTS—In addition to record time aloft airships proved in NADU tests they could keep an early-warning-watch throughout worst of winter weather.

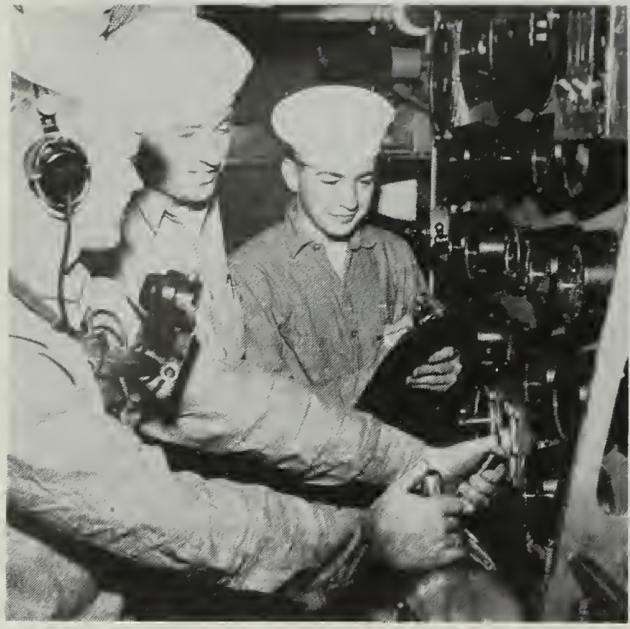
Whales, ice floes and icebergs were sighted on the first leg of the journey. So was *Whitey*. The Coast Guard one day found the blimp on its radarscope and came tearing out to the scene to destroy the "iceberg" threatening the sea lanes.

However, one of the most welcome sights to the airship crew was the NADU plane which visited the craft on the second and seventh days of its mission.

"Just like one of the family dropping in for Sunday dinner," observed the crew member. "Not expected, but welcome anyway. We would pass the time of day back and forth by radio. It gave us a feeling that someone knew we were still alive."

Finally, 11 days and 12 minutes after take-off, the airship landed at the Boca Chica Naval Air Station near Key West, Fla. The epoch-making flight was over.

NOW HEAR THIS—Part of the 14-man crew of *ZPG-2* receives briefing on chart to be used during flight from CDR Jack R. Hunt, USNR, airship's CO.

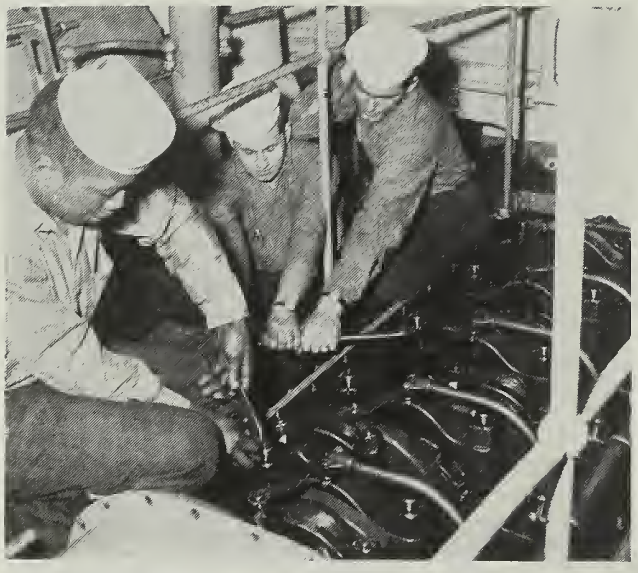


Floating Engineers

SINCE THE EARLY DAYS of engines, when the old USS *Princeton* (of the 1840s) was one of the first Navy steam ships afloat, the men in the enginerooms have been working, watching, checking, repairing and maintaining gear—to be sure that all the BTUs are giving the ship her RPMs.

Even in this nuclear age, engines must still be able to convert water to steam, to develop the power that turns the turbine and gives drive to the ship's screw. And the jobs involved in operating the engines of a modern fleet keep mounting. Well before time comes to get underway, FAs and FNs, BTs, MMs, and ENs head for their assigned spaces to set their watch. When a boiler is lit off there must be someone to man the feed-water pumps, while someone else mans the fuel oil pumps, heaters and burners. Others in the engineroom gang operate the forced draft blower system, to supply the air needed for combustion of the fuel.

Here's a picture story of ships' engineers in action. *Top right:* Valves and dials are checked in fireroom. *Top left*: Black gang in one of the firerooms of a flattop. *Left*: Enginemen work as team to remove piston and connecting rod. *Bottom left*: Skilled hands of bluejacket reseat valves in head of a diesel generator. *Lower right*: In DD engineroom throttleman checks RPMs as messenger records speed changes.



LETTERS TO THE EDITOR

This section is open to unofficial communications from within the naval service on matters of general interest. However, it is not intended to conflict in any way with Navy Regulations regarding the forwarding of official mail through channels, nor is it to substitute for the policy of obtaining information from local commands in all possible instances. Do not send postage or return envelopes. Sign full name and address. Address letter to Editor, ALL HANDS, Room 1809, Bureau of Naval Personnel, Navy Dept., Washington, 25, D. C.

What to do With ECC Booklets

SIR: As an administrator of the local Enlisted Correspondence Courses, I am in doubt as to what would be done with the ECC booklet upon completion of the course. I recall that BuPers Inst. 1510.67 requires that all material, except the text, be destroyed after the course is finished. Yet I remember an article in NavPers 14900 which specifically states that the ECC booklet should be turned in to the division officer and destroyed. Please advise.—C. G. S., LT., USN.

- *The instruction to which you refer is intended to facilitate advancement in rate training by division officers. The reason for directing destruction of this material when no longer needed is to guard against indiscriminate compromise of the corrected assignment booklets and answer sheets.*

It is not considered inconsistent with the above-mentioned instruction for commands to retain the assignment booklets on board until the enrollee has fully completed his training, provided adequate measures are taken to ensure against compromise. The time for the destruction of assignment booklets is left to the discretion of the local command. The textbooks (Navy Training Courses), however, must be returned to the Center upon completion of the correspondence course.—ED.

Opportunity for a Commission

SIR: Could you please give me any information available on the program or programs whereby an enlisted married man without a college education has the opportunity of becoming an officer? What are the BuPers Instructions which established these programs?—R. E. D, ENS, SC, USNR.

- *There are three in-service procurement programs under which an enlisted man, married or single, has a chance for appointment to commissioned rank in the Navy. They are: the Integration Program, the Limited Duty Officer program, and the Warrant Officer program.*

You will find all the information on these three programs in BuPers Inst. 1120.18C.—ED.

One Shoe Off and One Shoe On

SIR: While recently rereading the Nov 1955 issue of ALL HANDS I came upon a picture of the painting you captioned "From the Halls of Montezuma . . ." Even though I have seen this painting many times before, I have never noticed that the officer leading the troops is minus a shoe on his left foot as is evident in this painting.

Is there a story behind the shoeless officer or is it just imaginative painting? —R. E. J., QMC, USN.

- *No, this isn't a legend but a fact—Major General John Anthony Quitman, the officer to whom you refer, did actually lose his shoe while leading his battalion of U.S. Volunteer Marines through a reconnaissance the day before they entered Mexico City, 14 Sep 1847. The general's shoe came off after he had fallen into a canal; but Quitman was not alone in his embarrassment.*

First Lieutenant P.G.T. Beauregard (who later served as a leading general of the Confederate army) accompanied the general on the reconnaissance and also into the canal; but the junior officer managed to retain both shoes.—ED.

'SHOE ENOUGH' General Quitman had only one on when he led Marines into Mexico City during War in 1840.

Dependent Medicare

SIR: In several months I will be eligible for transfer to the Fleet Reserve, and I'm wondering how such a transfer will affect the care afforded my dependents under the new Medicare Act. Recent publications have only served to confuse me on this issue.

Will my dependent wife and children under 21 be eligible for medical care at civilian facilities? At military facilities only? At either civilian or military facilities? And when I have completed thirty years what will be the status of my dependents?—A. L. S., SKC, USN.

- *Depending upon local restrictions, your wife and dependent children may elect to receive authorized medical care, either at medical facilities of the uniformed services or from acceptable civilian medical sources so long as you are on active duty. Upon your transfer to the Fleet Reserve, however, or when you are placed on the Retired List, your dependents will be entitled to care* ONLY *at medical facilities of the uniformed services.*

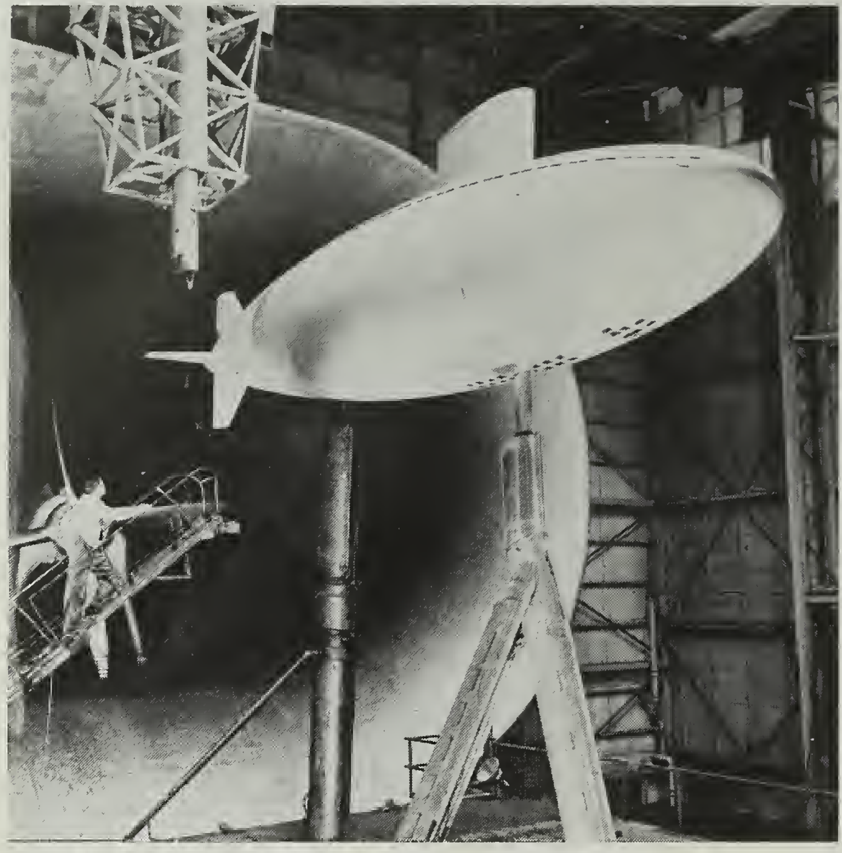
SecNav Inst. 6320.8 lists the care your dependents are eligible to receive from various sources; BuPers Inst. 1750.5A contains instructions for obtaining the necessary DD Form 1173, Uniformed Services Dependent Identification and Privilege Card. *For a report on the rights and benefits available to dependents of naval personnel, including a summary on dependent medical, see the May 1957 issue of* ALL HANDS.—ED.

Legal Yeomen

SIR: I have heard that the Navy Department is considering a special corps for Legal Officers. If this is true, is there any consideration being given to the establishment of an enlisted rating for this corp, such as legal yeoman? As a legal yeoman and court reporter, I feel that this is necessary because it is a specialized field and is considered to be a profession rather than just anther clerical job in civilian life—O. A. R. YN2, USN.

- *A rating of Legal Yeoman or Court Reporter is not at present being considered by the Permanent Board for the Review of the Enlisted Rating Structure. The establishment of such a rating was considered in 1955, but was not recommended.*

It appears that the yeoman rating is expected to encompass all legal and court matters that will in most cases normally be encountered by any career yeoman in the normal course of his various naval duty assignments.—ED.



HIGH FLYING SUB — What looks like a guided missile is hull model of world's fastest sub *USS Albacore* (AGSS 569) undergoing tests in wind tunnel.

Questions on Advancement Exams

SIR: A number of the CDs here in Mobile Construction Battalion Ten are wondering just what sources are used by the Examining Center in writing questions for the chief driver's examinations.

One of our reasons for wanting to know: Last year's exam contained several questions on a certain type of crane which does not appear in the training manuals. To top that off, we wrote the manufacturers to request technical information on the crane. They had no training material available.

Then there's another crane that appears in the Navy's current textbooks, but to the best of our knowledge the Navy no longer uses that particular crane. We don't particularly mind the failure of the exams to keep up with the operating Navy, since the study material at least is available and can be studied for test purposes, then forgotten. But we do resent the use of material which doesn't appear in the texts and which we apparently cannot lay hands on.

Another questionable matter occurs in such areas as preventive maintenance schedules, procedures and methods which have changed from year to year. How are we expected to know what year will be covered in this month's exam—or in next year's exam for that matter?—J. R. C., CD1, USN.

• *First of all,* NavPers 10052D, *"Training Courses and Publications for General Service Ratings," contains a list of the publications used by the Examining Center in making up examinations. Those listed for CD ratings, including CDC, are: "Driver 3 & 2" (NavPers* 10640-B); *"Driver 1 & C" (NavPers* 10641-B); *Chapters* 2, 3, 4, 10 *and* 12 *of "Mechanic 3 & 2" (NavPers* 10644-B); *"U. S. Navy Automotive Maintenance" (TP-Tr-2); and "Automotive Construction and Railroad Equipment Administration and Operation" (TP-Tr-1). These represent the minimum amount of material with which you should be familiar. However, you can't learn everything from books. You are expected to acquire certain knowledge from your work and operating instructions. This is particularly so in the case of new equipment, such as the crane you mention.*

In today's modern Navy, with its rapid technological advances and consequent changes in procedures and methods, it is hardly possible to keep training manuals completely up to date. However, additions and deletions of equipment, changeovers to newly-developed procedures, methods and so forth, are invariably publicized through other channels such as BuDocks Technical Digest and information should be available in your own organization.

As for the training courses and manuals, revised editions appear about every three years. Letters from the Fleet pointing out errors, obsolete equipment, and improved procedures are a helpful guide to the writers of training material in ensuring that each revised manual and training course is as up to date as possible. Letters concerning the material published for Group VIII ratings may be addressed, via channels, to the Chief of Naval Personnel (Attn: Pers C112), Department of the Navy, Washington 25, D. C.—ED.

Writing for Navy Newspapers

SIR: I have been assigned the job of assisting the ship's Public Information Officer in preparing material for the base newspaper. I understand that a publication entitled *Navy Editors' Manual* was published in years past and was wondering if any of these manuals were still available. If possible, I should like to have a copy since I think it might help me to learn the Navy journalistic methods.—A. B. B. SA, USN.

• *The Ship's Editorial Association (SEA), which published the "Navy Editors' Manual," has been consolidated with the Armed Forces Press, Radio and Television Service in New York. That office now has in print a manual "Armed Forces Editors' Guide" which is similar to the earlier "Navy Editors' Manual."*

AFPS also distributes two weekly clipsheets, with mats and stencils. You should request their services in a letter to: Officer-in-Charge, Armed Forces Press, Radio, and Television Service, Room 1425, Fisk Building, 250 W. 57th St., New York 19, N. Y., via the appropriate command channel and the Administrative Officer, Navy Department.—ED.

Applying for School of Music

SIR: I am holding a TAR billet in the active Naval Reserve at NAS Seattle, Washington.

I would like to know if, under BuPers Inst. 1336.2B, I am eligible to enroll in the U. S. Naval School of Music for either the Basic Course (Class A) School, or the Refresher Course (Class C-1) School?—R. K. Harris, YN3, USNR.

• *No. As a TAR you don't qualify for enrollment in the Navy's School of Music. However, if you are interested and willing to reenlist in the Regular Navy you should submit a request via official channels to the Chief of Naval Personnel for reenlistment and transfer to the Naval School of Music, Naval Receiving Station, Washington, D. C., for duty under instruction in the basic course. You should also enclose NavPers Form 759, Inservice Application, with your request.*

Further information can be found in BuPers Inst. 1130.4C.—ED.

Flying Colors

Sir: I would appreciate your lending me some assistance on three questions:

1. If a ship is flying colors at half mast and gets underway, should colors be flown at half mast even though the ship is moving, or should they be flown two-blocked?

2. If prep is hoisted at 0755 and a ship gets underway at 0759.30, should prep be hauled down, even though colors have not been executed on the base, or should the ship, which is about 25 yards from the pier, follow the base and render the salute toward the music on the base?

3. If a flagship gets underway without the division commander on board, although his flag has not been hauled down, should the ship fly his call even if he is on leave, or should his flag be hauled down and replaced by the commissioning pennant?—S. A., QM1, USN.

- *Here are the answers to your questions:*

1. The colors would be flown two-blocked when the ship is underway.

2. The prep should be hauled down and colors displayed, even though a ship gets underway after prep is hoisted. The distance of the ship from the pier makes no difference, since movements of the base are not followed after getting underway.

3. When the division commander's flag is flying, a ship underway should fly the division commander's call even though he is not on board.—Ed.

Eligible To Take Advancement Exam

Sir: Relative to service requirements, will a man who was advanced to PO1 on 16 May 1955, then was discharged on 11 Jul 1956 and reenlisted on 3 Aug 1956, be eligible to participate in the February 1958 examination for advancement to CPO?—T. S., PN1, USN.

- *No, your man would not be eligible because by February 1958 he would have only two years, eleven months and ten days of service in pay grade. Although reenlistment within three months of discharge is considered to be continuous service, credit for time not served cannot be given when determining eligibility for advancement or for final multiple earned.*—Ed.

Reenlistment Leave

Sir: I shipped over in June 1956 and was refused shipping over leave because I was the only forecast duty officer at the station.

Since I've now been transferred, I was wondering if it is too late to apply for shipping over leave.—L. J. R., AGC, USN.

- *It is not too late, Chief. If service requirements prevented your taking reenlistment leave subsequent to reenlistment in June 1956, you may still apply for such leave in accordance with "BuPers Manual," Art. C-6203(3).*—Ed.

Who Fired The Last Shot?

HOLDING OUT until the end, *USS Tigrone* (SSR 419), radar picket sub for detecting ships, missiles, fired last shots of World War II on 13 Aug 1945.

Sir: A letter from R. A. L., YN1, in the January 1957 issue of All Hands indicated that he thought USS *Tigrone* (SSR 419) fired the last shot of World War II on 13 Aug 1945. Perhaps, but unless *Tigrone* got off her rounds very late in the day, I'm afraid she wasn't quite the last.

Why not? I quote from the war history of USS *Pennsylvania* (BB 38):

"At 0755 on the morning of 7 Dec 1941, *Pennsylvania* was sitting in dry dock in the Pearl Harbor Navy Yard when the Japanese began their attack. *Pennsylvania's* 50-caliber machine gun crews had their guns in action even before General Quarters was sounded.

"While lying at anchor in Buckner Bay, Okinawa, on 12 Aug 1945, *Pennsylvania* was torpedoed by a Japanese torpedo plane. The following day she was towed into shallower water where salvage operations were commenced.

"On the night of 13 Aug 1945, *Pennsylvania* saw her last action of the war. An enemy suicide plane made a run on the ships in the harbor and crashed in flames on the deck of a cargo ship about 1000 yards off the starboard beam of *Pennsylvania*. The secondary batteries of *Pennsylvania* trapped the plane by radar and fired 13 rounds. The 40mms fired 30."

Based on this quote, I'd like to suggest that, not only was *Pennsylvania* one of the last to fire during World War II, but also one of the first.—W. G. S., YN1, USN.

- *Not the type to take undue chances, we asked Naval History Division what it thought of your statement. History decided to play it cagey too, and expressed no opinion. It merely stated:*

*"*USS Pennsylvania *(BB 38) commenced fire, on the attacking Japanese aircraft, at Pearl Harbor, between* 0802 *and* 0805 *(-11 zone time),* 7 *Dec* 1941.

*"*USS Pennsylvania *(BB 38) fired her last shot, against enemy aircraft, at* 2006, *(-9 zone time), on* 13 *Aug* 1945."

According to Naval Chronology *of* World War II, *Japan agreed to surrender on* 14 *August.*

So make your own decision. We realize that no matter who actually fired the last shot it was the ones that preceded it that really counted, but we too can't help but be curious. Any other claimants for the honor?—Ed.

WAR HISTORY of *USS Pennsylvania* (BB 38) shows night of 13 Aug 1945, was her last action of World War II. Perhaps her late hour is a record.

Stormy Petrel I, II, III, IV

Sir: In our wardroom on board uss *Petrel* (ASR 14) we have hanging a picture of an earlier *Petrel.* We know nothing about it and were wondering if you could help orient us and, perhaps, give us a fill-in on its career.—C. R. D., CWO, usn.

- *It's a good question and we're glad you asked us because it gives us an opportunity to display the virtuosity of our Research Desk. We don't know how Research did it, but after considerable digging, it came up with the following facts:*

In the first place, which Petrel *are you talking about? There were three earlier versions.* Petrel I, *which was purchased in 1846, was a 74-ton gunboat which saw action during the war with Mexico in 1846-47.*

In addition to participating in raids on Panuco and Laguna, Petrel *was part of the flotilla which, under the direction of Commodore David Conner, commander of the Gulf Squadron, took part in the attack on Vera Cruz. The Squadron also included the small vessels such as* Spitfire, Vixen, Bonita, Reefer, Falcon *and* Tampico, *each of which carried one or more heavy long-range guns for shore bombardment.*

PAINTING OF uss *Petrel II* shows her three masts. She took part in the Civil War expeditions.

It isn't likely that the Petrel *in your wardroom is this one—but if it is, you have an illustrious ancestor. This period, which marked the real beginning of steam in the U. S. Navy, is also considered by historians to have provided the groundwork for future amphibious operations. The Vera Cruz operation is a case in point.*

The planning was extensive and careful. The larger Navy ships furnished crews for the surfboats with a lieutenant in command of each division of 10 boats. The steamer Princeton *anchored as close to the beach as possible, with the surfboats stationed on her quarters in double lines parallel to the beach. Between these lines and the beach were seven light-draft gunboats (including* Petrel) *armed principally with 32-pounder guns. Similar to the LCI boats of World War II in the Pacific campaigns, these ships shielded the lines of surfboats and stood ready to provide fire support to the landings if necessary.*

The small boats, loaded with some 4500 soldiers, advanced in a single line formation to the beach where a simultaneous landing was made with colors flying and bands playing. They met with little opposition. Four hours later, approximately 10,000 men had been landed, complete with equipment and provisions.

This Petrel *was transferred to the Coast Survey in 1850.* Petrel II, *a fourth-rate "tin-clad" of 226 tons earlier known as* Duchess, *was purchased for the Navy by RADM David D. Porter in 1862. She took part in two expeditions in the Yazoo River during the Civil War, and in 1864 was captured by the Confederates and destroyed. It is possible that this* Petrel *may be the subject of your picture.*

Petrel III *was also a gunboat. Launched in Baltimore in 1888, she was 181 feet long, had a 31-foot beam and displaced 890 tons. Commissioned in 1889, she was assigned to the North Atlantic Squadron in 1891 and later served in Asiatic and Pacific waters until 1911.*

During the Spanish American War she was one of Dewey's Fleet in Manila Bay. She was sent into the harbor of Cavite to destroy any ships that may have taken refuge there. Placed in Reserve in 1915, she served as station vessel at Guantanamo Bay. During WW I she was a unit of American Patrol Detachment, Squadron One, Division One at Boston. She was stricken from the Navy list in 1920.

We trust that Petrel IV *will also carve her niche in naval history.*—Ed.

LATER VERSION—uss *Petrel III* was launched as 181-foot gunboat in 1888. She served during Spanish-American War, remained in Fleet until 1920.

1600 or 1800 Tons?

Sir: The question of the classification of destroyers has come up. My query concerns the displacement of several similar type DDs.

The description of the ships is as follows: two stacks, broken deck with separated firerooms and enginerooms. A few of the ships in question are uss *Grayson* (DD 435), uss *Parker* (DD 604), uss *Frazier* (DD 607) and uss *Kearny* (DD 432).

I want to know if the Navy classifies these ships as 1600-, 1650- or 1800-ton destroyers. I am under the impression *changes, actual light displacement of* that the hull design is a 1630 but the displacement is that of an 1800 type.—J. E. D., MM1, usn.

- *The ships mentioned in your letter are of the DD 421 and DD 423 classes. In the DD 421 class are the DD 604 and the DD 607; the remaining ships in question belong to the latter class.*

These classes were designed to have standard displacement of 1620 and 1630 tons, respectively. Owing to weight growth through the years, necessitated by additional equipment and design displacement is now 1810 tons, as cited in official Navy publications.—Ed.

SNs Not Under Shorvey-Seavey

Sir: I am a seaman with two years of sea duty. Is it possible for me to be transferred to a shore duty under the new Shorvey-Seavey rotation arrangement?—W. L. B., SN, usn.

- *It doesn't look that way. Shorvey-Seavey does not change the current directives under which a seaman is ineligible for shore duty. You must be rated or be a designated striker before you may request shore duty.*—Ed.

Qualifying for NavCad Program

SIR: I intend to make the Navy my career and would like very much to get into the NavCad program, but my mechanical score on the Basic Test Battery is not sufficiently high. Although I did not finish high school, I expect to do so through USAFI. Is it possible for me to retake the mechanical test after I finish the high school training?—R. S. P,. SR, USN.

- *You (or your command) may write a letter to the Chief of Naval Personnel requesting authorization for you to retake any one or all of the tests in the basic test battery.*

The letter of request must contain the following information:

1. *Purpose of retest.*
2. *Results of initial testing in terms of test scores on all classification tests recorded in the service record.*
3. *Date of original testing and date of retest if applicable.*
4. *Formal schooling completed before you took the original test and the date such school was completed.*
5. *Schooling and experience since the date you first took the test (including naval and civilian schooling you have taken, USAFFI courses and tests, other correspondence courses you have completed, etc.).*
6. *Other pertinent information concerning conditions under which previous testing was accomplished which would have a bearing on your request for a retest (language difficulty, for example).*

Finally, if you initiate the request yourself, your commanding officer's forwarding endorsement should indicate his evaluation of the merits of the request.

If the command initiates the request, this evaluation should be a part of the basic letter.—ED.

Disposal of Deck Logs

SIR: A question has arisen in connection with the new type deck log. Provisions are made specifically for the disposition of the new type log but nowhere do I find any provisions for the disposition of old rough deck logs and carbon copies of smooth logs.

I understand that rough deck logs may be destroyed after three years and smooth logs after two years, provided a copy has been forwarded to the Bureau. If we continue with the present system we will end up in a year or so with just one or two copies of the deck log which have no apparent use. Has any provision been made or instruction issued to authorize ships to destroy all copies of rough deck and smooth logs aboard ships? Where may I find instructions covering destruction of *Notice to Mariners* and *Monthly Information Bulletins*?—P. R. T., QM1, USN.

- *It seems that innovation has again resulted in confusion—but disposal instructions remain the same. The rough deck log maintained by ships submitting a smooth copy to the Chief of Naval Personnel may be destroyed after a three-year period but is subject to certain limitations clearly stated in disposal instructions. The changes in deck log format which were introduced in July 1955 and used since that time do not apply to disposal instructions.*

The Type B deck log is the original holographic (written by hand) record submitted to the Chief of Naval Personnel. It is not intended that a copy of this log be maintained aboard ship. Requirements for carbon copies of Type B deck logs were discontinued in July of 1955.

According to the Ship's Deck Log Section of the Bureau of Naval Personnel, your ship, the USS Harder *(SS 568), is required to submit the Type B deck log. However, since late 1956* Harder *has only been forwarding type A, the rough log of which should be maintained aboard for the three-year period.*

The Navy Hydrographic office issues three Notices to Mariners weekly. One of these, "Navy Notice to Mariners," is classified and its destruction is covered in the "Security Manual."

Another publication from Hydro is the Bi-weekly "Information Bulletin" which is printed in two parts: "For Official Use Only" and "Chart for Sail." The former is to be disposed of in accordance with the "Security Manual" and the latter has no special disposal.—ED.

Sea/Shore Rotation for Sub Men

SIR: Under the present sea shore rotation program, what chance does a qualified submariner have of getting his first choice of duty assignment upon expiration of his normal tour of shore duty?—B. A. F., YN1 (SS), USN.

- *You have just as good a chance to get your choice of assignment as does any other enlisted man. Submariners are assigned by the same methods as all other enlisted personnel; however, the (SS) designators, which appear behind their rates, aid in their reassignment back to submarine forces.*

The new rotation program greatly increases the probability that submariners will be returned to the submarine forces after shore duty because of better planning. It is important that all submariners insure that their (SS) qualification is properly reported in the PAMI system through the NavPers 500 card or the personnel diary.—ED.

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Reunions on the Increase As Summer Months Arrive

News of reunions of ships and organizations will be carried in this column from time to time. In planning a reunion, best results will be obtained by notifying The Editor, ALL HANDS Magazine, Room 1809, Bureau of Naval Personnel, Navy Department, Washington 25, D. C., four or more months in advance.

• *First Marine Division Association*—Two reunions will be held this summer. The east coast reunion will be held at the Hotel Sherman, Chicago, Ill., on 9, 10 and 11 August. The west coast reunion is scheduled for the U.S. Grant Hotel, San Diego, Calif., on 23, 24 and 25 August. Details are available at the Division Association, P.O. Box 84, Alexandria, Va.

• *Fourth Marine Division Association*—The annual reunion is scheduled for the Hotel Cleveland, Cleveland, Ohio, on 27, 28 and 29 July. Inquiries may be addressed to LCOL W. G. Shoop, Fourth Division Association, c/o AO3, Headquarters Marine Corps, Washington 25, D.C.

• *Fifth Marine Division Association*—The eighth annual reunion will be held at the Statler Hotel, Buffalo, N. Y., on 28, 29 and 30 June. For information, write to Fifth Marine Division Association, Headquarters Marine Corps, Washington 25, D.C.

• USS *Maryland* (BB 46)—A reunion will be held on 18 August, in Silverado Park, Long Beach, Calif. For further information, contact E. U. Caldwell, 4758 Autry Ave., Long Beach 8, Calif.

• USS *Quincy* (CA 71)—The sixth annual reunion will be held in the Hotel Essex, Boston, Mass., on 23, 24 and 25 August. Additional information may be obtained from Ed Moore, 173 Carlton Terrace, Teaneck, N. J.

• *Seabee Veterans of America*—The 11th convention will be held in Detroit, Mich., on 9, 10 and 11 August. Details may be obtained from Mrs. Leo F. Crowley, Convention Secretary, 14035 Longacre Rd., Detroit 27, Mich.

• *Second Marine Division Association*—The annual reunion will be held at the Hotel Statler, Detroit, Mich., 19, 20 and 21 July. Write to Second Division Association, 4545 S. Christiana Ave., Chicago 22, Ill., for more information.

• *Third Marine Division Association*—The Marine Memorial Club in San Francisco, Calif., will be the location for the annual reunion on 19, 20 and 21 July. Inquiries may be addressed to the Third Marine Division Association, P.O. Box 548, Culver City, Calif.

• USS *Trego* (AKA 78)—A reunion will be held at the Hotel Waverly, Virginia Beach, Va., on 5 and 6 July. Contact M. A. Garner, Route 4 Box 87-G, Greenwood, S. C., for further details.

• USS *Washington* (BB 56)—The third reunion will be held at the Hotel Commodore, New York, N. Y., on 4, 5, 6 and 7 July. For additional information, write to John A. Brown, 1503½ N. 4th St., Columbus 1, Ohio.

• WAVES—Waves will celebrate their 15th birthday with a reunion to be held in Boston, Mass., on 26, 27 and 28 July. All present and former Waves are invited to attend. Further information may be obtained by writing to National Waves Reunion Committee—1957, 495 Sumner St., Boston 10, Mass.

• *73rd Seabees*—The eighth annual reunion will be held in Biloxi, Miss., at the Buena Vista Hotel, on 26, 27 and 28 July. Contact George J. Deens, 23 Butler Ave., Ambler, Pa., or Charles Barnes, 412 Merret St., Fort Worth, Tex.

• *93rd Seabees*—The eighth annual reunion is scheduled for 30 and 31 August, at the Hotel Fort Hayes, Columbus, Ohio. For information, contact Charles B. Lindsay, 150 Llewelyn Ave., Westerville, Ohio.

• *302nd Seabees*—The 10th annual reunion will be held at the Hotel Harrisburger, in Harrisburg, Pa., 19, 20 and 21 July. Details may be obtained from Harry W. Price, Jr., 135 Third St., Lewistown, Pa.

• USS *Borie* (DD 704) — The 1944-45 commissioning crew will hold its 8th annual reunion on 9, 10 and 11 August at Mishawaka, Ind. For details, contact Gail G. Hill, 610 Hubbard Avenue, Mishawaka, Ind.

• *Great White Fleet*—A 50th reunion is scheduled for all surviving members on 16 December at the U.S. Grant Hotel, San Diego, Calif. For further information, contact Harry S. Morris, TMC, Shore Patrol Headquarters, 726 Second Avenue, San Diego, Calif.

• USS *Hornet* (CV 8 & CV 12)—A reunion will be held on 6 July at the Hotel Emerson, Baltimore, Md. All interested officers and men should contact Thomas C. Stinnett, President, USS *Hornet* Club, 3903 Balfern Avenue, Baltimore 13, Md.

• *3rd Special Seabees*—The 7th annual reunion is scheduled for 19, 20 and 21 July at the American Legion Hall, Ventura, Calif. For further information write or wire Ventura Chamber of Commerce, 174 South California Street, Ventura, Calif.

• *Navy No. 157* (Palermo, Sicily)—The 6th annual reunion is scheduled for 28, 29 and 30 June at the Ambassador Hotel, Atlantic City, N. J. For information, write to Arthur L. Coddington, 679 Carlyle Pl., Union, N. J.

• USS *Inch* (DE 146)—All former shipmates who are interested in a reunion at a time and place to be decided should contact Mr. Herman Melanson at this new address, 140 West 55th Street, New York 19, N. Y.

• USS *Oriskany* (CVA 34)—All former crew members and members of all Air Groups who are interested in a reunion this fall in New York should write to P. A. Catalano, QM2, U.S. Naval Correspondence Course Center, Naval Supply Center, Scotia 2, N. Y.

• USNAS *Bunker Hill, Indiana*—Former crew members interested in holding a reunion, at a time and place to be decided, should contact Al Bengeyfield, 36 Brunswick Ave., Williston Park, L. I., New York.

• USS *LST 535*—All crew members who served on board from the time of commissioning until January 1946, who are interested in a reunion may contact David B. Witherspoon, Jr., P.O. Box 125, Windy Hill Beach, S. C.

• USS *President Adams* (APA 19) — For information concerning a planned reunion, write Albert Filipelli, 1546 Kimball St., Brooklyn, N. Y.

CQ to You, Too

SIR: I operate ham radio station W1VCU and would enjoy reading about and seeing a few pictures of Naval Amateur Radio Stations in the United States and overseas.

We amateur radio operators talk to Navy stations all over the world, but never get to see much about them in print.

I am particularly interested in KC4USA—Antarctica, KA2KS—Japan, and KL7AIZ—Adak, Alaska.—N. C. D., CT3, USN.

• *We'd be happy to oblige, but we can't write stories or print pictures that we don't have. When we do get usable stuff we run it in the magazine—as witness our July '56 issue, which contained a story and pictures of station KA2NA—Atsugi, Japan. The Naval Communications Bulletin also contains stories on ham operations.*

If the stations you mention were to send us pix, plus a few details on their operations, we might be able to work out a story along the lines you suggest. Or, next time you talk to a Navy ham you might suggest that he ask his PIO about sending us a story or putting out a general release about his operations. We can't make any promises, but we give such stories full consideration.

Incidentally, what about your own W1VCU? Maybe you have a story that you've been overlooking.—ED.

Coral Sea Navymen Rock 'n Roll, Afloat and Ashore Too

USS *Coral Sea* (CVA 43) has a rock 'n roll band that's a real Turkish delight. A radio pollster in Istanbul learned as much when he asked a local teen-ager to name his favorite musicians.

The young Turk promptly replied, "'Dizzy' Gillespie and Chief Ridge," indicating that he'd heard both of the American jazz concerts given in Istanbul in recent years. One was by the touring Gillespie band and the other, by a group of *Coral Sea* sailors led by Walter N. Ridge, MUC, USN.

The sailors performed under conditions which would have caused many musicians to blow their stacks instead of their horns. Because of the short notice of the ship's arrival, little advance publicity could be given the concert, and the only auditorium available was a gymnasium, where most of the band-members expected to be playing to the basketball hoops.

However, on the afternoon of the concert, more than 4000 screaming fans jammed the Sports Palace to hear them.

Next morning every paper in the city carried the story and pictures of the concert on their front pages, and an editorial in one of them thanked "the government of the United States for giving the people of Turkey an opportunity to become acquainted with this new and exciting music."

This response is typical of that which the band has received throughout the Mediterranean area. In Athens, Chief Ridge had to call for police protection when a yelling, stamping crowd of 8300 people didn't want the musicians to stop after three hours of continuous playing. In Genoa's austere Piazza della Vittoria even middle-aged matrons danced in the streets to the band's program of rock 'n roll selections.

Chief Ridge got the idea for the concerts last August, when *Coral Sea* was on her way to the Mediterranean. "A lot of Navy bands here in the Med," he says, "just go ashore every once in awhile to give a one-hour concert of march music to the pigeons in the city square. I decided that people over here would like to hear what Americans themselves listen to.

CRAZY, MAN!—Brass section of band from the large Sixth Fleet carrier rocks big crowd at Palermo concert.

For talent he drew heavily on his 18-piece ship's band, which were attached to *Coral Sea* for the duration of her cruise. Thirteen of these players were formed into the jazz band and from that group four of the best performers were selected for a "jam session" combo. From ship's company the chief also selected two vocal soloists, a tenor sax man and "The Cougars" — a choral sextet specializing in rock 'n roll.

After endless rehearsals, the first show was presented in Palermo, Sicily, on 23 September. Result: a throng of 7000 people kept the band playing for five hours. "One of the largest crowds we have ever seen in Piazza Castelnuova," commented one Palermo newspaper.

"We knew then," says trumpet player Chris Fiorito, MU3, "that these people liked our stuff and we were on our way." On their own time the performers worked to enlarge the band's repertoire, rehearsing arrangements by outstanding band leaders to lengthen the programs.

The problems of rehearsing while the ship is at sea are many. The ship's band has its regular schedule of official ceremonial music to prepare. The "Cougars" and two vocalists are often unable to meet with the band because of their regular duties as personnel of an operating aircraft carrier. The tenor sax soloist, Robert Repp, AQC, USN, can't leave his job when the ship is operating aircraft. So the band often rehearses during the noon hour or after working hours to prepare for its next performance.

A typical concert includes such instrumentals as "String of Pearls," "Perdido" and "Night Train." Vocals include songs like "Love Is a Many-Splendored Thing," "Lady of Spain" and "I'll Remember April." Between these selections the Cougars sing rock 'n roll pieces to the accompaniment of their own guitars.

During *Coral Sea's* recent tour of duty with the Sixth Fleet (she is now with PacFlt), the band has played to an estimated combined audience of more than 25,000 people in Sicily, Italy, Greece and Turkey.

Chief Ridge hopes that other Navy bands will also present more jazz when they come to the Mediterranean. "After all," he says, "when people are dancing they can't be very mad at each other. And, as long as they aren't fighting, the Fleet's job over here is going to be a lot easier."

—H. C. Pendergast, LTJG, *USN*

'ROCK AROUND THE MED'—Rock an' Roll band of *USS Coral Sea* (CVA 43) plays and sings for enthusiastic Sicilians.

International Naval Reviews

SHIPS OF MANY NAVIES are taking part in the International Fleet Review held at Jamestown, Va., this month. Although our own Fleet has been reviewed from time to time, this is the third international review to be sponsored by this country.

In 1893 ten nations took part in the first international review held in New York Harbor. Fourteen years later in 1907, ships from seven nations met in Hampton Roads, Va.

Top: White Ships of U. S. are reviewed alongside ships from England, France, Brazil, Russia, Italy, Germany, Holland, Spain and Argentina in 1893. *Upper left:* Second international review in 1907 included ships from Austria-Hungary, Argentina, Brazil, Chile, Germany and England. *Middle left:* USS *Iowa* and *New York* are among ships as U. S. Fleet is reviewed at close of Spanish-American war in 1898. *Lower left:* U. S. destroyers stand in review at Hampton Roads in 1927. *Below:* Last U. S. Fleet review was held on the Pacific Coast, at Long Beach in 1956.

NIGHT LIGHTS—Navy ships light the sky during fleet review in past.

From 1893 to 1957

An event which will find its way into history books of the future is taking place this month at Hampton Roads, Va., where more than 100 Atlantic Fleet ships and ships representing some 17 foreign nations are helping to celebrate the 350th anniversary of the settlement of Virginia.

Known as the International Naval Review the assemblage is scheduled to continue from 8 to 17 June, which has been designated as "Fleet Week." The theme of the review, the third of its kind to be held in U.S. waters, is "Freedom of the Seas."

The review is considered to be the largest peace-time display of warships in history. It is part of the program of the Jamestown Festival which began in April. The formal review will be held 12 June with an alternate date set for 13 June.

The nations involved in the exploration and settlement of the United States and the Americas and members of the North Atlantic Treaty Organization, whose western hemisphere headquarters (Supreme Allied Command, Atlantic) are at Hampton Roads, have been invited by the U.S. to send warships to Hampton Roads. Those taking part in the Fleet Review are Belgium, Canada, Colombia, Cuba, Denmark, Dominican Republic, France, Great Britain, Italy, Netherlands, Norway, Peru, Portugal, Spain, Turkey, Uruguay and Venezuela. The Chilean Navy may also participate. Other invited nations were not able to participate at this time.

After the review, 30 of the Atlantic Fleet ships will carry Naval Academy and NROTC midshipmen on their annual training cruises. Among these are heavy cruisers USS *Macon* (CA 132), *Albany* (CA 123) and *Des Moines* (CA 134); the battleships *Iowa* (BB 61) and *Wisconsin* (BB 64); aircraft carriers *Saratoga* (CVA 60), *Franklin D. Roosevelt* (CVA 42) and *Randolph* (CVA 15). Also included are the guided missile cruisers *Boston* (CAG 1) and *Canberra* (CAG 2) and the tactical command ship *Northampton* (CLC 1), which will serve as the reviewing ships, plus amphibious ships, submarines, minecraft, auxiliaries and others.

Approximately 40,000 American and visiting sailors have landed in Hampton Roads and neighboring communities for the first such international show in the last 50 years. A civilian committee working with the main review committee arranged for an extensive entertainment program.

The visiting Navymen and tourists will have plenty to see and do in the form of recreation. There will be sightseeing tours including a visit to Jamestown Island and colonial

FRENCH DESTROYER *Vauquelin* moves alongside, while French Navymen watch. *Above:* Turkish and Colombian sailors at attention during ceremonies.

NEW FRIENDS—U. S. Navymen will visit and talk shop with other sailors from different nations like these bluejackets enjoying mess on Italian BB.

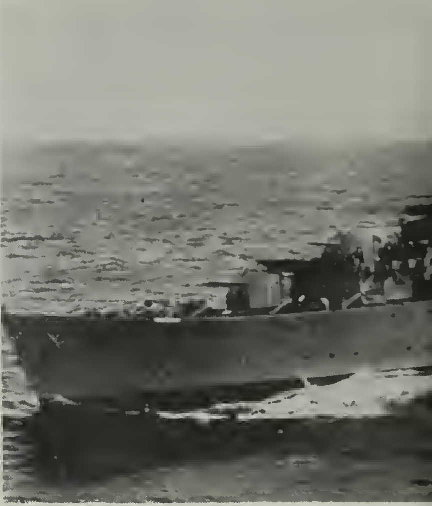
Williamsburg; concerts by several leading jazz orchestras; a professional baseball game; several cultural events including a concert by a symphonic orchestra; a modern dance and ballet demonstration, and instrumental and vocal solos; amateur and professional boxing matches a typical American county fair and international trade show; an ice show, circus and country music show.

International athletic competition is an added attraction as men from each ship challenge other crews to contests in soccer, basketball, rowing, swimming, tennis, boxing, track, field and other sports.

The purpose of the International Naval Review is to aid in the commemoration of the founding of the American colonies by settlers from Western Europe in 1607 which marked the beginning of an English-speaking culture in this country. The first settlers, who were carried by ships *Susan Constant*, *Godspeed* and *Discovery*, founded Jamestown, the oldest corporate community in the United States. Replicas of these ships will be participating in the festival.

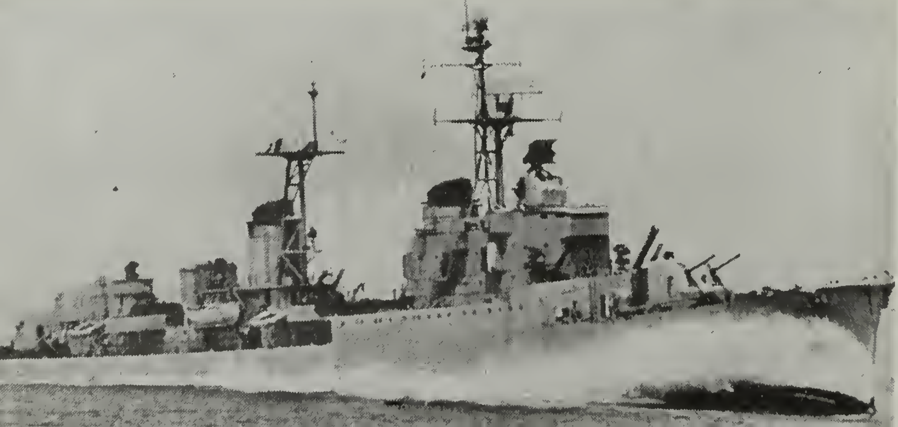
The review is sponsored by the U.S. Navy, the Virginia 350th Anniversary Commission and the Committee for the International Naval Review of the Virginia port communities of Hampton, Newport News, Norfolk County, Portsmouth, Princess Anne County, South Norfolk, Virginia Beach and Warwick.

The International Naval Review itself will be highlighted by a simultaneous gun salute to the reviewing official as soon as the reviewing ship approaches the participating vessels. The ships are to be anchored 8 June in two columns from Hampton Roads to Fort Story, a distance of about 14 miles. The ship carrying the reviewing dignitaries will pass through the review formation after having departed from the Norfolk Naval Base.



ENGLISH SHIPS at the fleet review

'ROMAN OVER'—From sunny Italy, Fleet Destroyer *San Giorgio* will cross Atlantic to participate in International Fleet Review off Virginia shores.



The first international review for which the United States was host was in 1893 when nine nations sent ships to Hampton Roads for a review by President Grover Cleveland in New York. The second, to which six guest countries sent representative vessels for review by President Theodore Roosevelt on 26 Apr 1907, was in connection with the Jamestown Tercentenary. He reviewed the ships from his presidential yacht *Mayflower*. President Roosevelt's arrival marked the beginning of the Jamestown Exposition which was located where the Norfolk Naval Base is today.

The theme "Freedom of the Seas" of this year's review was chosen to emphasize the role of the waters in the settlement of this country and to suggest the development of ship construction since *Godspeed*, *Discovery* and *Susan Constant* (copies of which can be seen at Jamestown) battled their way across the Atlantic 350 years ago.

Each visiting ship is to be assigned to a U.S. host ship which is to escort its guest into anchorage. The U.S. Navy crews will then assist in acquainting the foreign sailors with the Hampton Roads area. The host ships are to moor adjacent to or in the near vicinity of the ships to which they are assigned.

An added attraction to the review is the performance of the "Blue

lude two destroyers and a carrier.

SAILS AHOY!—When replicas of *Susan Constant* (above), *Godspeed*, and *Discovery* spread canvas at festival, they will not have an exclusive on 'air power' as Spain's *Juan Sebastian de Elcano* (below) will claim a share.

Angels," who are scheduled to go through their famed maneuvers over Hampton Roads.

Naval and Marine forces from the Amphibious Training Command of the Atlantic Fleet will perform a combat landing demonstration at Camp Pendleton which is south of Virginia Beach.

The largest visiting ship at the review is the British aircraft carrier *Ark Royal.* England is also represented by two destroyers.

During the entire "Fleet Week" all U.S. naval installations and ships in the Norfolk area are holding Open House for crew members and officers of guest ships and for the general public.

—William Miller, SA, USNR.

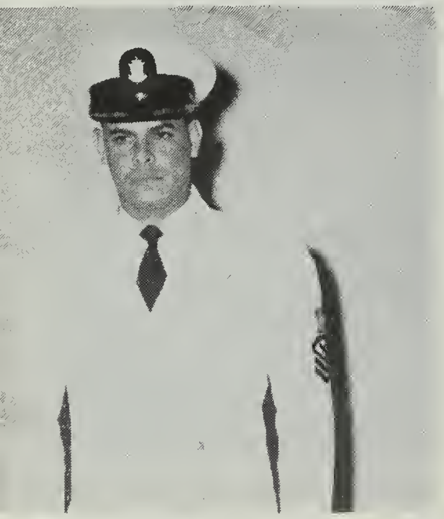
CAPTAIN SMITH—In pageant Navy Captain R. K. Irving wears uniform of the day as Captain John Smith.

Sailors of Many Nations

Belgium: This enlisted man and officer from Belgium are both crew members of a minesweeper.

Canada: Navymen of our northern neighbor will man Canadian destroyers in the fleet review.

Denmark: From the North Sea, Danish sailors such as these will represent their Navy.

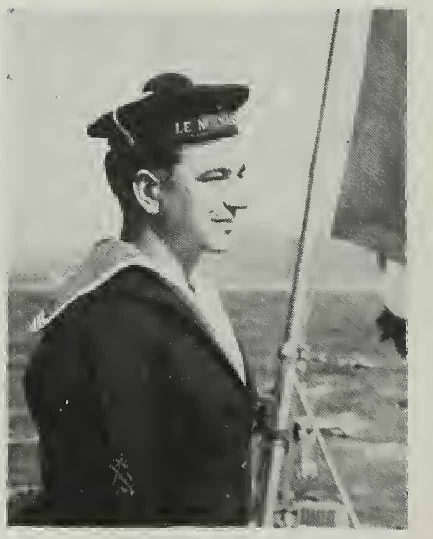


Dominican Republic: Her sailors will wear this style navy uniform.

Cuba: Navymen from the tropical Island of Cuba are sailing north in their ships for international show.

Uruguay: Among sailors from our neighbors will be navymen and ships from Uruguay.

Colombia: Navymen from down South America way will be at Jamestown fleet review.



France: The well known tasseled flat hat of the French Navy will be 'squared away' for review.

Great Britain: Enlisted sailors of Britain's Royal Navy will be present.

Chile: Sailors like these from a land long in naval tradition hope to take part in the Jamestown review.

Italy: Italian signalman flashes message from battleship. Italian ships and men will be at the fleet review.

Netherlands: Striped skivvy shirts are a distinctive part of Dutch uniform.

o Celebrate 'Fleet Week'

Norway: These sailors relaxing with guitar show the dress and working uniforms of their country.

Peru: An engineman third class in turtle-neck attire, and lieutenant, are typical of Navymen of Peru.

Portugal: From the land of seagoing men are Navymen from a Portuguese Man-of-War.

Spain: A Spanish sailor like those who will be on hand for review answers phone on a Spanish cruiser.

Turkey: Two Turkish sailors on shore patrol duty stop to compare smokes with a U. S. sailor.

Venezuela: With other navies from South America will be Venezuelan navymen.

★ ★ ★ ★ TODAY'S NAVY ★ ★ ★ ★

BOW ON view of *USS Forrest Sherman* (DD 931) and *USS Willis A. Lee* (DL 4) moored together points up sleek lines of these new class ships.

Tracking the Earth Satellite

Radio equipment, so sensitive it can "hear" invisible stars, is now in production for the Navy Department.

The ultra-sensitive radio, called "Minitrack," was designed and built originally by the Naval Research Laboratory to track the earth satellite which will be launched some time during the International Geophysical Year (31 Jul 1957 to 31 Dec 1958.) The original "Minitrack" system, along with 11 other receivers, will be strategically placed up and down the American continents to tune in on radio signals from the man-made moon as it orbits in space at 18,000 miles an hour—circling the earth about once every 90 minutes.

The satellite's 12-ounce transmitter will send its signal on a frequency of 108 mc (at the upper end of the standard FM broadcast band) with a power of from 10 to 50 milliwatts.

This is only one millionth as strong as the signal of a standard radio broadcasting station of 10 to 50 kilowatts rating, or to put it another way, 1/100,000th of the power consumed by a 100-watt light bulb. Radio equipment sensitive enough to receive this signal can listen to radio "noise" originating on the sun (not ordinary sun-spot "static") and detect the presence of stars that emit no visible energy.

Through the chain of 12 interconnected Minitrack receivers—each capable of determining the position of the satellite in the few seconds it is within radio range—a continuous "fix" on man's first space vehicle will be possible.

Without such precise information, observing the satellite in flight would be like trying to watch a golf ball, dropped from a jet plane flying at the speed of sound at 60,000 feet.

YESTERDAY'S NAVY

On 1 Jun 1948 as a part of the unification of the armed forces, Air Transport Command (ATC) and Naval Air Transport Service (NATS) were consolidated into the Military Air Transport Service (MATS). On 17 Jun 1863 U. S. ironclad *Weehawken* forced the surrender of the Confederate ram *Atlanta* in Wassaw Sound, Georgia. USS *Ranger*, first ship designed and built from the keel up as a carrier, was commissioned 4 Jun 1934. The greatest amphibious operation in history took place on Normandy, 6 Jun 1944. Naval bombardment of Vicksburg began on 26 Jun 1862.

Air Trolley

Ever hear of the real life Toonerville Trolley? Probably not. Membership is limited to a small group of USN aviation personnel assigned to Commander, U. S. Naval Activities, Spain. The "trolley" is one R4D-8, which logs approximately 250 hours a quarter.

The crew performs the usual maintenance under the Spanish sky at Getafe Spanish Air Force Base, situated some 10 miles from Madrid.

Chief pilot and the only plane commander assigned at the present time, is LCDR Albert T. Hall, USN. His job is to keep the plane in flying condition to support the contractors and officer in charge of construction of the military bases under construction in Spain.

The plane, known throughout the Spanish airways as the "Toonerville Trolley," has carried a variety of cargo besides civilian and Navy engineers. It has carried rocks of various dimensions, concrete specimens, mail, milk and turkeys.

The plane crew does its own bookings for passenger space; loads and unloads the cargo; sees to the comfort of the passengers and keeps the plane flying regardless of the obstacles to be faced.

The crew members leave their homes at 0630 each morning and if they get back before 2000 that night they have had a short day.

Every control tower in Spain knows the "Trolley." While other plane commanders of civilian airlines are trying to raise particular points, the pilot gives out the call signal, "dos-cuatro-dos-ocho," and he is immediately answered by control. When he did not make a run to one part of Spain which he had been doing regularly, the next time he went, the operator at one check point inquired why he did not fly to that part on his scheduled day.

During recent months, men of the group have handled engine changes with a hand crew-box and with a minimum support and have also devised their own supply line. Major maintenance is done at Port Lyautey, but to keep the plane in Spain to handle the problems placed before it, the crew does it at Getafe.

The man who keeps the home fires burning is R. D. Sullivan, chief aviation machinist's mate. When minor maintenance and checks come up, the flight mechanics and radio operator pitch in and help the small maintenance crew.

The only other man who has logged as many hours as LCDR Hall, is H. B. Farrell, AT1, who is the plane's radioman. Even when the plane goes up for a check flight after a maintenance check, Farrell is on board at his customary seat in the radio compartment.

As for the flight mechanics, C. L. Hatcher, ADC, and J. R. Carson, AD2, alternate the trips.

The "Trolley" will be the nucleus of the Naval Air Station at Rota when it's commissioned sometime this year.

Mountain Movers at It Again

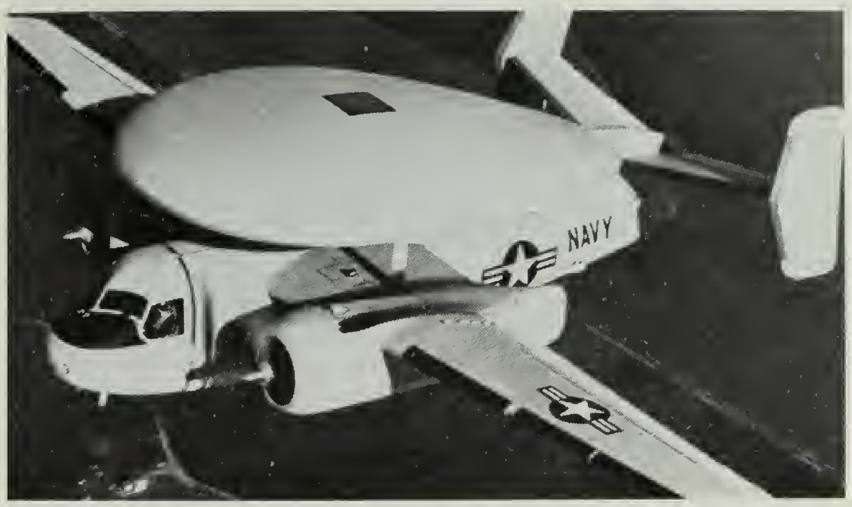
Seabees are making firm friends among the cadets of the Japanese Military Academy. Seabees of Amphibious Construction Battalion One, stationed at Yokosuka, Japan, are completing an additional six acres of training field at the academy to add to the 14 acres constructed for the school's opening back in 1955.

With the completion of the job, 9000 cubic yards of hilly soil will have been cut and leveled by ACB-1 to provide more training space.

In the spring of '55, the Seabees first used heavy excavation and grading equipment to remove and redistribute 29,900 cubic yards of earth, working mostly on the weekends and in their spare time.

This opened a field for the academy, which trains cadets for all branches of Japan's defense forces, for drill, athletics and maneuvers.

The 1300 cadets of the academy go all out to make the Seabees feel at home. They regularly bring green tea to the workers and three of the cadets stayed at the academy during their Christmas leave in order to learn to use Seabees' equipment.



MUSHROOM TOP—Navy's new WF-2 houses latest type radar antenna on top of fuselage. Primary mission is to serve as early warning aircraft sending info.

Automatic Landing System

An automatic carrier landing system has successfully completed all land trials and is now being installed on a carrier for tests under actual carrier flight operations.

In land-based tests leading up to its sea trials, the system completed more than 1200 landings with a high rate of precision.

Completely automatic, ACLS has successfully landed six different types of jet fighters, large transports, and light commercial aircraft at a number of different bases. It operates in all kinds of weather.

The system, which is highly mobile, is a combination of radio and radar. Radar locates the airplane and determines its altitude and position in relation to the carrier deck. An electronic computer does the rest, sending the necessary course corrections to a device that directs the airplane into desired flight pattern.

Reflecting the present study of ship motion at sea in an effort to stabilize ship pitch and roll, the system takes into account the carrier's movement the instant the plane is about to touch the deck. If the airplane is not in the best attitude for a safe landing, ACLS automatically sends the airplane around for another attempt.

Tests on board the carrier are expected to require four months.

During one part of the land-based phase of the test program, a pilot was successfully guided through four actual blind landings during a heavy snowstorm. Other airplanes in the area were unable to take off or land because of the restricted visibility, which was less than a quarter mile.

The system will not only make all-weather flight possible but may be used to land pilots who are either wounded or overly tired after flying long missions.

Trainer for Weapon Loaders

A trainer for giving crews practice with weapons loading aboard AJ aircraft has recently been developed by the Naval Training Device Center, Port Washington, N. Y.

The trainer consists of a simplified AJ-2 cockpit supported by wheels and includes a bomb bay section complete with suspension racks. The cockpit section includes identical T-boxes, armament selection and power switches and controls used in the actual aircraft. The trainer simulates the aircraft wiring and preflight check and loading of actual or simulated weapons as well as the postload check. It is designed for mobile use, is capable of loading all weapons found in AJ aircraft and uses standard power.

The trainer is being used within the FAETULant Weapons Training Program but can also be used by other weapons training activities and aboard carriers. Crews can also be trained on the device in hangar spaces or on a parking strip.

The Center plans to develop a trainer patterned after the A3D.

LEADING THE FIELD—The men of Submarine Force Pacific Fleet are ahead in gifts sent in to the Navy-Marine Corps Memorial Stadium Fund Drive.

Contributions Roll in for Stadium Fund

Several major Fleet units, SubPac, Atlantic Fleet Marine Force Troops, CinCNELM Staff and NATC Patuxent River are among the leading contributors to date in the Navy-Marine Corps Memorial Stadium Fund Drive. The Memorial Stadium will be paid for out of funds contributed by Navy and Marine units (see April 1957 ALL HANDS, page 22).

Ships and stations who are the leaders in their class as of 1 May are:

Submarine Force PacFlt (Average $1.40 per man)	$8080.55
USS *Lexington* (CVA 16)	1851.07
USS *Wasp* (CVA 18)	1850.00
Force Troops, FMF Lant	1814.87
CinCNELM Staff	1620.75
Naval Air Test Center, Patuxent River	1454.07
USS *Yellowstone* (AD 27)	1200.00
USS *Thetis Bay* (CVHA 1)	1200.00
USS *Iowa* (BB 61)	1180.53
NAS Anacostia	1100.00
NAS Minneapolis	1075.00
USS *Northampton* (CLC 1)	1000.00
1st Marine Brigade, FMFPac	967.57
Fleet Air, Whidbey	911.63
Marine Aircraft Group 31 (REIN), FMFLant	740.00
Bureau of Naval Personnel	700.76
USS *Vulcan* (AR 5)	600.00
USS *Gatling* (DD 671)	5[illegible]3.00
USS *Barry* (DD 933)	500.00
Naval Air Material Center, Philadelphia	484.76
Naval Ammunition Depot, Hingham, Mass.	470.00
U. S. Naval Regional Accounts Office, Washington D.C.	430.64
USS *Spangler* (DE 696)	400.00
USS *Olmsted* (APA 188)	388.47
USS *Gen W. A. Mann* (TA-P112)	375.00
USS *Altair* (AKS 32)	346.78
Electronic Countermeasures Squadron Two (VQ 2)	345.00
USS *Chukawan* (AO 100)	250.00
U. S. Naval Regional Accounts Office, Pearl (70 civilians, 8 officers)	230.00
OICC BuDocks Contracts—Madrid ($7.35 per man)	213.00
USS *Remora* (SS 487)	211.30
USS *Aldebaran* (AF 10)	200.76
USS *Grampus* (SS 523)	132.00
USS *Tanner* (AGS 15)	128.00
USS *Deliver* (ARS 23)	114.00
USS *Adroit* (MSO 509)	58.25
USS *Luiseno* (ATF 156)	45.00
SubPac—Hawaii Marines Benefit Basketball Game	2646.09

Many ships and stations are still to be heard from as the drive gains momentum. All units of appropriate size are making a special effort to reach the $1000 mark which will result in a separate plaque, with their name inscribed thereon, to be displayed on the stadium when built. Other units making donations below this mark will have their names listed cumulatively.

Many in the Fleet are taking the opportunity to dedicate memorial chairs in the Navy-Marine Corps Stadium. For a contribution of $100, a memorial chair may be dedicated to any individual, officer or enlisted, who has served or is now serving in the Navy or Marine Corps. So far the requests for memorial chairs have passed the 230 mark.

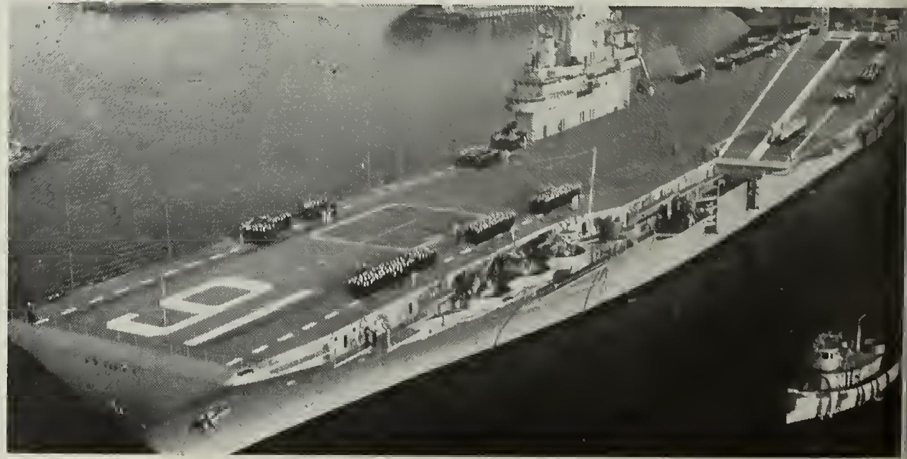
The plans for naming the chairs that seem to be the most popular in the Fleet are: (1) Name of the individual for whom the ship is named; (2) Name of a shipmate lost in action or an operational casualty; and (3) Name of the individual contributing.

As of 1 May 1957, funds in hand, donated for the construction of the stadium at Annapolis, Maryland, passed the $225,000 mark on the march toward the goal of $2,000,000 to be raised by donations. This sum, added to the $1,000,000 already set aside toward the project by the Naval Academy Athletic Association, gives the fund a total of $1,225,000 of the $3,000,000 needed to build the Stadium.

The feeling fostered by the construction of the stadium is summed up in a letter received from Brigadier General G. R. E. Shell, USMC, Commanding General, 1st Marine Brigade, FMFPac:

"I have long felt that the Navy and Marine Corps needed a single Memorial honoring the memory of our fighting men who made the supreme sacrifice in our common cause. I can think of no finer tribute than an Athletic Stadium, where the ideals of teamwork are taught and learned, the teamwork that is symbolic of, and so necessary to the military man This symbol is particularly appropriate in that it will also honor all present and future members of the Navy and Marine Corps and serve as a continuing reminder of the proud tradition that is our heritage."

OFF AND RUNNING—USS *Lexington* (CVA-16) ranks second in her contributions to Navy-Marine Corps Memorial Stadium Fund Drive now being held.



Install Biggest Radio Telescope

Installation of the largest radio telescope in the United States is under way in southern Maryland by the Naval Research Laboratory. It will be known as the Maryland Point Observatory.

The telescope will consist of an 84-foot dish-shaped antenna mounted at the top of a large steel supporting tower. The antenna, which will be built primarily of aluminum, will be mounted with one axis parallel to the earth's axis, permitting tracking of any celestial object with a simple clock drive, as is done in large optical telescopes. It is this feature, coupled with the antenna's size, which will set the new instrument apart from other existing radio telescopes and will add greatly to its utility, permitting the detection of fainter sources of radio signals, as well as the more detailed study of more intense sources.

The southern Maryland site was chosen for the installation because of the excellent view of the horizon it provides and also because of the low radio interference.

Radio astronomers at NRL will use the new scientific instrument in the continuing program of research on radio radiation from the sun, moon, and planets, as well as to carry on studies of the composition and physical processes occurring in interplanetary, interstellar, and intergalactic space. Recent accomplishments in this program, begun in 1946, have included the first detection of radio radiation from Mars and Venus and measurements of radio wave lengths that have confirmed present theories on the expansion of the universe.

Accident Saver

The first "Universal Digital Operational Flight Trainer" (UDOFT) is being developed under a contract awarded by the U. S. Naval Training Device Center, Port Washington, N. Y. The UDOFT program is jointly sponsored by the Department of the Navy and the U. S. Air Force.

The UDOFT system will provide the additional speed and versatility in ground training devices needed to simulate the characteristics of the growing number of supersonic planes which U. S. pilots will be flying.

The system is centered around a new large-scale digital computer of great flexibility, speed and accuracy. This will make it possible to shift the trainer from the simulation of the flight of one plane to the flight of another, as well as to change flight conditions or aerodynamic characteristics to test their effects on the simulated plane and the response of the pilot.

In the trainer, the pilot sits in an actual airplane cockpit, as he would in flight. His controls and instruments are connected with floor-to-ceiling banks of computing and other electronic equipment next to the plane section. With the cockpit canopy closed, the trainee can see only the instruments and controls used in actual flight.

Although the cockpit itself does not move, the electronic "brain" simulates flight by setting appropriate readings on the instruments. The trainee's teacher has a duplicate set of instruments and controls at the computer panel, from which he can determine what the trainee is doing. He can also introduce new conditions like engine failure, air turbulence and weather, which the electronic "brain" translates on the cockpit instruments, and which the trainee must work through the proper use of his stick, throttles and other controls. Changed instruments readings which the "brain" alters after calculating the effects of the trainee's actions, indicate how he is "flying."

The UDOFT computer eventually will be able to solve equations for several cockpits simultaneously, allowing a group of trainees to receive simultaneous instruction, either in independent flight, in flight formations, or in simulated combat.

LUXURY LINER? — No, these Navymen are enjoying off-duty hours at sea on board *USS Vulcan* (AR 5) in their newly decorated and furnished lounge.

How to Get Seasick Ashore

A contract to design, build, and install a large ship-motion simulator for the performance evaluation of the Navy's Fleet Ballistic Missile has been awarded.

The simulator will be used to reproduce ship motions for the purpose of checking guidance and fire-control systems and handling, check-out, and actual firing procedures for ship-launched missiles.

The major purpose of the simulator will be to determine the limiting conditions under which a missile can be safely launched from a moving platform without interference from the platform. In the process, such factors as crew safety, operation of the launching mechanism, and operation of the guidance controls will be studied.

Designed to duplicate the essential features of the motion of a ship, the simulator will be capable of producing a periodic roll and pitch in any direction while simultaneously producing the heave motion.

Actual ship motions may be reproduced from magnetic tape recordings taken at sea. In this way studies can be made of many devices under controlled and repeatable conditions.

The simulator includes a system capable of determining the dynamic thrust forces at take-off in much the same manner as is done in a wind tunnel.

The ship-motion simulator will be installed at the Air Force Missile Testing Center, Cocoa, Florida, where the latest of Navy's guided missiles will get their sea legs tested.

SERVICESCOPE

Brief news items about other branches of the armed services.

ARMY SIGNAL Corps goes to sea in cable ship to lay new 1250-mile telephone line from Washington to Alaska.

★ ★ ★

THE FIRST LINK in the chain of the Arctic Radio System relay antennas has been completed by the Air Force. This new communications system connects North America's most remote radar warning system to combat centers of the Alaska Air Command.

Its primary purpose is to enable the Alaska Air Command to receive reports of aircraft detected by radar outposts such as the Distant Early Warning Line north of the Arctic Circle.

Radio signals, which may contain many telephone conversations and telegraph messages, are beamed from antenna to antenna. In order to arrive at its destination, the beam is deflected off the troposphere, a layer of air five miles above the earth.

At the center of each relay station, which might be as far as 170 miles from the next point, is a 100-ton antenna which resembles a screen of an outdoor theatre and is in precise alignment with antennas on other stations.

Land lines could not be used because they would require maintenance over impassable tundra and large mountain ranges. This signal system was selected because it is free from atmospheric disturbances which make ordinary communications in the North impossible at times.

★ ★ ★

A GREATLY IMPROVED "weather station" that is ejected from an airplane to determine weather characteristics in inaccessible parts of the world has been developed by the Air Force.

This instrument is a radiosonde, a weather-sensing radio transmitter developed at Wright Air Development Center. The new version is more accurate and adaptable than its predecessor, yet costs less.

Radiosondes have been used for several years by the Air Weather Service to determine the weather characteristics over the oceans and polar regions where permanent weather stations are not practical. The units are parachuted from airplanes and transmit a complete record of humidity, temperature, and air pressure until they hit the earth.

The improved radiosonde is designed for use from altitudes up to 60,000 feet and at speeds up to Mach .98 as compared to the 30,000-foot and Mach .43 limits on the older model. In addition, the new unit is 95 per cent reliable as compared to a previous reliability of 80 per cent.

Six seconds after leaving the airplane, the radiosonde parachute pops out of its housing, stabilizing the unit and lowering it gently toward earth. Simultaneously, a one-foot antenna automatically snaps downward and a short arm extends perpendicular to the radiosonde.

On the arm are located relative humidity and temperature sensing elements and inside the container is an air pressure bellows. These three devices immediately begin to sense temperature, humidity and pressure and transmit this data by radio back to the airplane.

Inside the airplane a receptor picks up the signals, then decodes and records them. This record is evaluated by a technician who in turn radios the findings to a central weather station.

Some 25,000 radiosondes are dropped each year by seven weather squadrons flying daily in the Northern Hemisphere.

★ ★ ★

A NEW TYPE FACE SHIELD for use by troops or others required to work in extremely cold climates has been developed by the Army Engineer Corps.

The face shield is designed particularly for use under severe conditions such as encountered in arctic regions where men are required to work outside.

The idea of a face shield for use in cold climates came as the result of a painful experience which one of the Army engineers had in the arctic in 1947. While at Fort Churchill, he suffered a frozen cheek and "this made me think how stupid it was to have the rest of the body well-protected from the cold and yet leave one's face virtually unprotected."

The new face shield remains free from cloudiness resulting from condensed moisture of respiration, and incorporates an improved, readily adjustable mounting which permits upward rotation through an arc of 90 degrees for a short period of time. Its head harness is adjustable for size. The main shield and inner frost apron are of transparent plastic.

AIR FORCE *GLOBEMASTER* lands at Navy's Williams Air Facility, bringing in supplies for Deepfreeze.

Two new mobile ditching machines capable of digging four-foot deep trenches at rates exceeding 20 feet a minute are undergoing tests at Fort Belvoir, Va. It is anticipated that the rubber-tired units may prove extremely useful to the Army and Civil Defense in providing protection for personnel against flash burns or fragmentary bombs, and radioactive blast.

One model, mounted on a special vehicle which is powered by a 154-horsepower diesel engine, can dig a trench at the rate of 28 feet a minute. It has 21 buckets with interchangeable insert-type teeth.

Mounted on a standard truck, the other unit is capable of digging at the rate of 24 feet a minute. Its hydraulically operated boom can be placed into the digging position in less than a minute after arrival at a site.

This machine consists of 40 buckets which are equipped with interchangeable insert-type teeth, and features a side leveling mechanism that permits it to dig on side slopes up to 15 degrees. Both units have a maximum digging depth of six feet and can excavate a foxhole in 30 seconds. They can also be used for the rapid excavation of other types of field fortifications and utility trenches.

★ ★ ★

The largest skis ever made for aircraft are claimed for the C-130 *Hercules* designed to serve as an Air Force cargo-troop carrier in the Arctic and Antarctic regions.

They are equipped with "knee-action" to serve as a pillow when the big transport touches down on the ice. Engineers say the knee-action gives the same shock absorbing cushion to the plane that it would get from tires in a normal landing on a concrete runway.

With installation of these skis, 62-ton *Hercules* is expected to have the ability to make cushioned landings on any type of terrain from rough, hastily prepared fields to sand to ice caps.

The three skis of the *Hercules* will resemble landing craft. Two skis will operate in conjunction with the main landing gear and the other with the nose gear.

LIGHT 7.62 machine gun which can be fired from shoulder, hip or mount will replace Army's caliber .30 guns.

DOG WATCH—Sentry dogs and their airmen handlers keep watch at the USAF Strategic Air Command Bases.

The pilot can change the landing gear from conventional wheels to skis, or from skis to wheels. The change-over will enable the pilot to take off from a dry concrete runway and land on any type of snow from deep, soft slush to hard, weathered snow of the polar ice caps, or he can make a ski-take-off and then land on his wheels.

On the ground, the ski-version of the plane can be steered by turning the nose ski, just as on concrete you would turn the nose wheel. The nose ski will turn in a 60-degree arc.

When skis are in the retracted position during flight, they fit snugly against the fuselage.

★ ★ ★

New ideas in food are being flight-tested in an experimental kitchen just completed by the Air Force.

Designed as a research facility to improve meals for air crews, the fully-equipped kitchen is being used to test the preparation of food in aircraft-type ovens and to determine their acceptability to flyers.

Ideas born in the experimental kitchen, in some instances, will be turned over to the Quartermaster Institute for the Armed Forces in Chicago, where they will be further developed. Tests will be made there to determine how long the food will remain usable and palatable, how well it is received and how easy it is to produce.

The new kitchen is built into an L-shaped room. It contains stainless steel counters on two walls, a double sink, garbage disposal unit, gas range and oven, and an electric oven.

Above and below the counters are rows of steel storage cupboards, two refrigerators and two freezers. A ventilation system removes cooking odors. The kitchen is also equipped with 220 volts of electricity for the regular oven, and 110 for general electrical appliances and flight food service equipment.

The only thing missing is an automatic dishwasher, and that was purposely omitted since flight meals must be prepared for serving on disposable plates and cups and eaten with disposable utensils.

This Is the Life at Arco U, Idaho, for Nuclear Fleet Sailors

MOST NAVYMEN ordered to nuclear training are unfamiliar with the southeastern Idaho area and the living conditions there. This is the scoop:

There are three cities located within a 60-mile radius of the Naval Reactor Facility at Arco, Idaho, where you'll be stationed for at least six months or more if you are a nuclear submarine trainee, and for a year or more if you are a nuclear surface ship trainee.

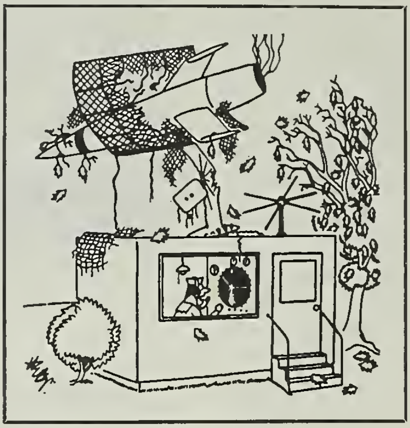
Idaho Falls

Idaho Falls, a city of over 25,000 population, has eight elementary schools, a central intermediate school, junior high school and high school. In addition, there is a private school and seven privately owned and operated nursery schools and kindergartens. A business college also operates in the city.

Idaho Falls has two modern and fully equipped hospitals with 285 beds. Both hospitals have excellent laboratory facilities and are staffed by highly trained technicians. Thirty nine physicians and surgeons, including specialists in almost all fields, are available in the city. There are also 23 dentists.

Thirty-five churches serve Idaho Falls, representing nearly all major denominations.

For recreation the city boasts of 245 acres of parks, including an 18-hole golf course, a zoo, swimming pool and natural history museum. The city has five movie theaters, an array of night clubs and supper clubs, rodeo grounds, and the Highland Park baseball field—home of the professional Idaho Falls "Russets" of the Class C Pioneer League. National names in the entertainment world appear at the imposing Civic Auditorium, and local groups including the Idaho Falls Symphony Orchestra offer varied programs during the year. Two radio stations and one television station are located in the city.



"I have something."

Idaho Falls has 372 retail stores to give the shopper a wide variety of goods. Several "neighborhood" shopping districts are to be found in the city.

Most national and international civic clubs have active organizations. Weekly meetings are held by many clubs.

Rail, air, truck and bus routes converge from all directions to make the city a transportation hub for the area. In addition to two air lines serving the city, chartered plane service is available.

Idaho Falls is primarily a city of individually owned homes, but houses, duplex type apartments and other larger type apartments are available to rent. As a result of the demand for housing to meet the needs of a fast growing city, many of the homes and rental units are very new and modern.

Blackfoot

Blackfoot, with a population of 6000, has six grammar schools, a junior high school, a parochial school, and a new high school.

The Singham Memorial Hospital has a 50-bed capacity. It offers modern, up-to-date service and maintains an open staff. Seventeen doctors serve the area.

Churches of nine different denominations are found in the city.

Blackfoot has two parks, a swimming pool, tennis courts, three movie theaters and a drive-in theater. A nine-hole golf course will soon be built. The city maintains a youth recreation program during the summer months.

More than 150 retail outlets are located in the city. Blackfoot has one local radio station and receives television from the Idaho Falls station.

Pocatello

Pocatello has a population of approximately 30,000. It's the home of the Idaho State College and has a modern high school, a business college, two parochial schools, three junior high schools, and 10 elementary schools. During the 1956-57 school year 9000 students were enrolled in the public schools.

It also has two hospitals with a total of 250 beds, and a number of competent doctors and dentists practice in the city.

Thirty churches representing 20 different demoninations serve the area.

Recreation facilities include Professional Class C Baseball at Halliwell Park; two nine-hole golf courses a municipal swimming pool, bowling, skiing and skating, four movie theaters, night clubs and supper clubs. Concerts, presenting nationally famous artists, are held during the winter months, at Frazier Hall on the Idaho State College campus.

A wide variety of retail outlets serve the city, offering selections of merchandise comparable to stores in much larger cities.

Most national and international civic clubs are active in the city.

Two radio stations and one TV station serve the city.

Housing in Pocatello is very similar to housing in Idaho Falls. Multiple type rental units are more common than single units, however.

- ***Housing***—If the Naval Reactor Facility isn't able to arrange for housing to be available for you upon your arrival, it will be to your advantage to check all three cities—Idaho Falls, Blackfoot and Pocatello—when looking for housing.

In general, housing is not too difficult to find. It's somewhat expensive in Idaho Falls and Pocatello, and a little cheaper in Blackfoot. The latter is the smallest of the three cities, therefore, it has the least housing available.

A good place to start looking for a place to live, is in the want ads of the local newspapers. At Pocatello, however, the Chamber of Commerce operates as a clearing house for the Navy in locating available housing and placing new arrivals. Since Pocatello is the largest of the three cities, it appears to be most promising and it offers the largest list of available housing.

There's no federal housing available in the area. The approximate price for a two-bedroom unfurnished home runs between $75-$100 per month, while those with three bedrooms run from $80 to $120. A two-bedroom furnished home can be rented for about $100 per month. A number of apartments both furnished and unfurnised, can be found in each of the three cities and are much cheaper than renting individual houses.

Most unfurnished homes do not include stoves or refrigerators. Electric stoves are most common as the majority of the rentals are not equipped to supply gas.

If you cannot find adequate housing as soon as you arrive, a number of motels are available. Some of them provide kitchen facilities. Rates vary according to your length of stay, the number of occupants and in some cases the type of service (maid service, etc.) you desire.

- ***Household Effects*** — There are three major transfer and storage companies in the area.

Also note the following:

Proper consignment addresses for shipment of household goods for personnel assigned to the U.S. Naval Nuclear Power Training Unit, Idaho Falls, Idaho, are as follows:

Van Shipment—If it is possible to determine prior to shipment from the individual concerned whether he will reside in either Pocatello or Idaho Falls, Idaho, consign shipment as appropriate to the individual "For Storage in Transit, not to exceed 180 days," and annotate bill of lading as follows: "Notify Receiving Officer, Naval Ordnance Plant, Pocatello, Idaho, telephone 3380, extension 44 prior to unloading." In the event a determination cannot be made, consign to Pocatello, Idaho, for storage in transit. (If you drive to Pocatello, you will pass the Naval Ordnance Plant.)

Express Shipment — Consign to residence address if known. If you do not have an address, consign to Receiving Officer, Naval Ordnance Plant, Pocatello, Idaho, marked for individual concerned.

Freight Forwarder or Trucks—Consign crated household goods to Receiving Officer, U.S. Naval Ordnance Plant, Pocatello, Idaho, marked for individual concerned.

Immediately upon shipment of household goods, forward one copy of your orders, one copy of standard form 116 and one memo copy of bill of lading to the Commanding Officer, U.S. Naval Ordnance Plant, Pocatello, Idaho, marked "Attn: Household Effects Section." (This is an exception to the published "U.S. Naval Shipping Guide" but is very important in order to insure prompt and free delivery. This information should be brought to the attention of your local supply officer.) Commercial insurance on van shipments is suggested.

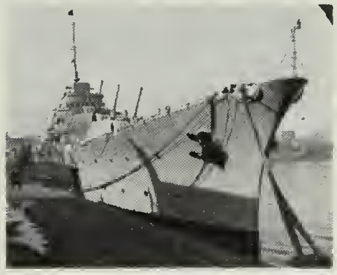
- ***Commissaries and Exchanges***—No commissaries or Exchange are available at the Naval Reactor Facility or in the immediate area. There are adequate civilian grocery, dry goods and hardware stores in the area which can handle all of your needs. Prices are cheaper than in most of the major cities throughout the U.S.

- ***Medical Care***—The dispensary at the Naval Reactor Facility handle minor cases for naval personnel only. There is no facility available for dental work, so personnel should attempt to have outstanding dental work completed before arrival. Arrangements will be made with civilian dentists for emergency work for naval personnel. Naval dispensaries are located in Pocatello and Idaho Falls to provide out-patient care to naval personnel and their dependents. Adequate civilian hospitals, doctors and dentists are also available.

- ***General Info***—Idaho State automobile licenses range between $7.50 and $17.50, depending upon the model of the automobile. Full price plates are due January 1 of each year. Half-year prices become effective July 1 of each year. If you drive an automobile in Idaho, you

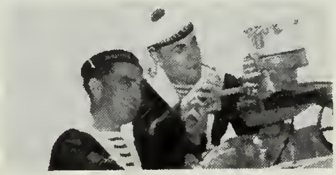
QUIZ AWEIGH

Since the International Fleet Review—the largest peace-time display of warships in history—is taking place this month, let's see how much you know about some of our allied navies. In case your seaman's eye is not in focus, the answers to this foreign navy quiz can be found on page 42.



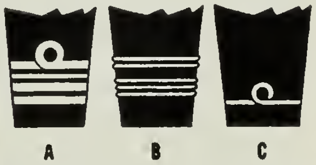
1. This ship was completed back in 1924. It's a unit of the (a) Royal Canadian Navy (b) Spanish Navy (c) Royal Hellenic Navy.

2. Displacing some 4500 tons, it is capable of reaching a speed of 29 knots. This is a/an (a) antiaircraft cruiser (b) frigate (c) corvette.



3. Here are two happy sailors from one of the NATO navies. The pompons on their hats should be a dead giveaway. They're from (a) Holland (b) Norway (c) France.

4. Assuming that you haven't missed a question yet, here's an easy one on foreign ranks and sleeve markings. Figure "A" represents a



Yarbay in the Turkish Navy. Naturally, he would rate a salute because he would be a (a) Rear Admiral (b) Captain (junior) (c) Lieutenant Commander.

5. In Figure "B" if three of the five stripes were gold and the second and fourth were silver, it would represent a French naval (a) commander (b) Captain (c) Rear Admiral.

6. To be sure that you get 4.0 on this quiz, here's a cincher. Figure "C" is a commissioned officer in the Royal Navy. He is a (a) Commodore (b) Midshipman (c) Sub-Lieutenant.

are required to have an Idaho driver's license. This license is obtained at the Sheriff's Office at a cost of $2 for a two-year period. A true and false test concerning driving rules must be satisfactorily passed before receiving a license.

Fishing and hunting licenses are $4 each per year to residents of the state. Service men get a special hunting and fishing license costing $2.50 each or a combination for $5.00.

The Naval Reactor Testing Station and communities of eastern Idaho are at an elevation near 5000 feet.

During winter cold spells, nighttime temperatures may drop to a minus 30 degrees; however, such temperatures are rare (so the Chamber of Commerce says) and daytime temperatures usually will be higher than 20 degrees F.

In line with this it is suggested that you bring appropriate clothing and have anti-freeze in your automobile sufficient to withstand temperatures of —30° F.

The road conditions encountered in this portion of the U.S. in winter may be extremely hazardous. Conditions will vary from clear and dry roads through blizzard conditions to extremely slick glare-ice. You are advised to allow adequate time for covering the distances involved. Further, you may need chains for your automobile in the mountain regions.

Summer high temperatures above 95 degrees F. rarely occur more than twice a year, and even the warmest days are accompanied by cool nights.

Being assigned to NRF means that you'll be living in the heart of America's playland.

Just over a hundred miles from Idaho Falls lies world famous Yellowstone Park—the country's most visited national park.

To the west of the National Reactor Testing Station is the unusual National Monument, the Craters of the Moon. This spectacular display of lava flows, cinder cones, and other products of volcanic activity attracts thousands of visitors every year.

Within a few hours' drive is the Idaho Primitive Area. Here runs the River of No Return, and the Salmon River which cuts through the mountains to lands where few have gone before. Deer, elk, bear, big horn sheep and goats roam the rugged mountains. Countless lakes and streams are also to be found. Nimrods from over the nation gather here—in the state that claims more square miles of untrammeled fishing and hunting areas than any other in the union.

If you're a ski enthusiast, you will find no better skiing slopes, and no better snow than is offered by the ski facilities surrounding the NRTS. Sun Valley with its superb ski runs, picturesque Pine Basin, towering Snow King Mountain and beautiful Bear Gulch are all within a short drive, and each provides skiing at its finest.

NOW HERE'S THIS

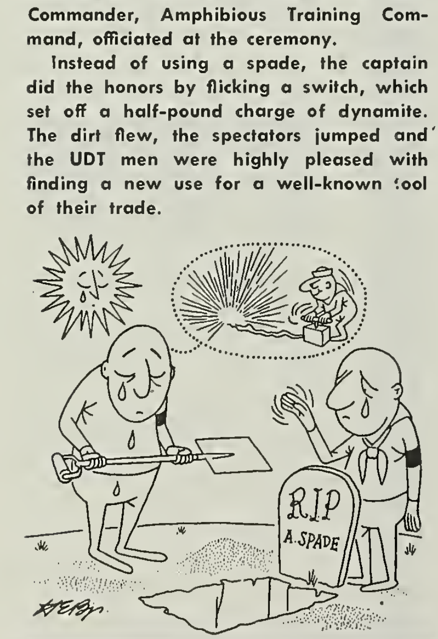
Ground-Busters

If you've seen one, you've probably seen a thousand news photos of dignitaries shaking hands. Another picture, just as stereotyped, is the one of some official bending over a spade as he turns the first shovelful of earth for a new building.

Now, however, the Navy's frogmen have changed all that—and they've done it with a bang.

This earth-shaking departure from tradition took place at Silver Strand, Coronado, Calif., during the ground-breaking (or perhaps "ground-busting" would be more appropriate) for a building to house the Underwater Demolition Training Unit of the Amphibious Training Command, U. S. Pacific Fleet. CAPT B. C. Allen, Jr., USN, Commander, Amphibious Training Command, officiated at the ceremony.

Instead of using a spade, the captain did the honors by flicking a switch, which set off a half-pound charge of dynamite. The dirt flew, the spectators jumped and the UDT men were highly pleased with finding a new use for a well-known tool of their trade.



Second Chance to Pass Correspondence Courses

Students who flunk courses at the Correspondence Course Center will be given a second chance at a passing grade under a new procedure to be inaugurated by the Center on 1 July. They will be permitted to rework the course assignments they failed.

The procedure will work this way:

If a course assignment is satisfactory (3.4 for officer courses; 3.2 for enlisted courses), the Center will return the assignment to you with the grade indicated, and no further action is required.

If an assignment is unsatisfactory the Center will notify you of your grade, but will not return the assignment. You may still earn a satisfactory grade in the course by increasing your efforts and attaining higher grades on your remaining assignments so as to bring your average grade for all assignments up to passing.

If, on course completion, your average grade for all assignments is satisfactory you will have passed the course.

If, on course completion, your average grade for all assignments is not satisfactory the Center will give you an opportunity to rework the assignments you have failed. If, after reworking the assignments, your average for the course is satisfactory you will have passed the course.

Naval Reserve officers are required to have a satisfactory grade for each creditable unit of a course (usually 12 points). The opportunity to resubmit assignments will be given these officers at the end of the course unit rather than at the end of the entire course.

When resubmission is required, the student must rework each unsatisfactory assignment in its entirety and within the time limit set by the Center to be eligible for consideration. He will be given only one opportunity to resubmit failed assignments.

This procedure applies only to assignments received at the Center on and after 1 Jul 1957. Unsatisfactory assignments received before this date may not be reworked, as the assignment will already have been returned to the student indicating the correct answer for each item.

List of New Motion Pictures Scheduled for Distribution To Ships and Overseas Bases

The latest list of 16-mm. feature movies available from the Navy Motion Picture Service, Bldg. 311, Naval Base, Brooklyn 1, N. Y., is published here for the convenience of ships and overseas bases. The title of each picture is followed by the program number.

Those in color are designated by (C) and those in wide-screen processes by (WS). Distribution began in December.

These films are leased from the movie industry and distributed free to ships and most overseas activities under the Fleet Motion Picture Plan.

The Power And The Prize (719): Drama; Robert Taylor, Elizabeth Mueller.

The White Squaw (720): Western; David Brian, May Wynn.

Tension At Table Rock (721) (C): Western; Richard Egan, Dorothy Malone.

A Strange Adventure (722): Drama; Joan Evans, Ben Cooper.

The Unguarded Moment (723) (C): Drama; Esther Williams, George Nader.

D-day The 6th of June (724) (C) (WS): Drama; Robert Taylor, Richard Todd.

Rock Pretty Baby (725): Drama; John Saxon, Sal Mineo.

Death Of A Scoundrel (726): Drama; George Sanders, Yvonne DeCarlo.

Huk (727) (C): Drama; George Montgomery, Mona Freeman.

The Solid Gold Cadillac (728): Comedy; Judy Holliday, Paul Douglas.

The Revolt Of Mamie Stover (729) (C) (WS): Drama; Jane Russell, Richard Egan.

You Can't Run Away From It (730) (C) (WS): Drama; June Allyson, Jack Lemmon.

Reprisal (731) (C): Adventure Drama; Guy Madison, Felicia Farr.

Hold That Hypnotist (732): Comedy; Huntz Hall, Stanley Clements.

Port Afrique (733) (C): Drama; Pier Angeli, Phil Carey.

Hot Shots (734): Comedy; Huntz Hall, Stanley Clements.

"When reveille was piped, I heaved out and triced up; then I got my gear and myself all squared away . . . went topside to the starboard weather deck . . . got in the chow line . . . messed with all the hands . . . mustered at quarters . . . and turned to . . . Understand?

The Boss (735): Drama; John Payne, William Bishop.

Man From Del Rio (736): Drama; Anthony Quinn, Katy Jurado.

Gun The Man Down (737): Drama; James Arness, Angie Dickinson.

The Great Man (738): Drama; Jose Ferrer, Joanne Gilbert.

The Man In the Gray Flannel Suit (739) (C) (WS): Drama; Gregory Peck, Jennifer Jones.

Stagecoach To Fury (740) (WS): Western; Forest Tucker, Mari Blanchard.

Everything But The Truth (741) (C): Comedy; Maureen O'Hara, Tim Hovey.

Dance With Me Henry (742): Comedy; Bud Abbott, Lou Costello.

The Girl He Left Behind (743): Drama; Tab Hunter, Natalie Wood.

The Proud Ones (744) (C) (WS): Drama; Robert Ryan, Virginia Mayo.

Lust for Life (745) (C) (WS): Drama; Kirk Douglas, Anthony Quinn.

Public Pigeon No. 1 (746) (C): Comedy; Red Skelton, Vivian Blaine.

Man in the Vault (747): Drama; William Campbell, Karen Sharpe.

Julie (748): Drama; Doris Day, Louis Jourdan.

Tea and Sympathy (749) (C) (WS): Drama; Deborah Kerr, John Kerr.

Teenage Rebel (750) (WS): Drama; Ginger Rogers, Michael Rennie.

Giant (751) (C): Drama; Rock Hudson, Elizabeth Taylor.

Tomahawk Trail (752): Western; Chuck Connors, Susan Cummings.

The Great American Pastime (753). Comedy; Tom Ewell, Ann Francis.

Lisbon (754) (C) (WS): Drama; Ray Milland, Maureen O'Hara.

Bandido (755) (C) (WS): Drama; Robert Mitchum, Ursula Thiess.

Halliday Brand (756): Drama; Joseph Cotton, Viveca Lindfors.

The Seventh Cavalry (757) (C): Western; Randolph Scott, Barbara Hale.

Hollywood or Bust (758) (C): Comedy; Dean Martin, Jerry Lewis.

The Bottom of the Bottle (759) (C) (WS): Drama; Van Johnson, Ruth Roman.

Bigger Than Life (760) (C) (WS): Drama; James Mason, Barbara Rush.

Thunder Over Arizona (761) (C) (WS): Western; Skip Homeier, Kristine Miller.

Nightfall (762): Drama; Aldo Ray, Anne Bancroft.

Three Violent People (763) (C): Drama; Charlton Heston, Anne Baxter.

The Best Things In Life Are Free (764) (C) (WS): Musical; Gordon MacRae, Sheree North.

The Sharkfighters (765) (C) (WS): Drama; Victor Mature, Karen Steele.

Love Me Tender (766) (WS): Drama; Elvis Presley, Debra Paget.

Wicked As They Come (767): Drama; Arlene Dahl, Phil Carey.

The Wrong Man (768): Drama; Henry Fonda, Vera Miles.

The Burning Hills (769) (C) (WS): Western; Tab Hunter, Natalie Wood.

Between Heaven and Hell (770) (C) (WS): War Drama; Robert Wagner, Terry Moore.

Canyon River (771) (C) (WS): Adventure Drama; George Montgomery, Marcia Henderson.

Crime of Passion (772): Drama; Barbara Stanwyck, Sterling Hayden.

Written on the Wind (773) (C): Drama: Rock Hudson, L. Bacall.

The Last Wagon (774) (C) (WS): Western; Richard Widmark, Felicia Farr.

Bus Stop (775) (C) (WS): Comedy; Marilyn Monroe, Don Murray.

Safari (776) (C) (WS): Adventure Drama; Victor Mature, Janet Leigh.

The Black Whip (777) (WS): Drama; Paul Newman, Colleen Gray.

Hot Summer Night (778): Crime Drama; Leslie Nielson, Colleen Miller.

The Night Runner (779): Drama; Ray Danton, Colleen Miller.

The Naked Hills (780) (C): Drama; David Wayne, Keenan Wynn.

The Man is Armed (781): Drama; Dane Clark, May Wynn.

Wetbacks (782): Drama; Lloyd Bridges, Nancy Gates.

Top Secret Affair (783): Comedy Drama; Susan Hayward, Kirk Douglas.

Carousel (784) (C) (WS): Musical Drama; Gordon MacRae, Shirley Jones.

Gun for a Coward (785) (C) (WS): Drama; Fred MacMurray, Jeffrey Hunter.

Rumble on the Docks (786): Drama; James Darren, Jerry Janger.

Utah Blaine (787): Western; Rory Calhoun, Max Baer.

Moby Dick (788) (C): Drama; Gregory Peck, Richard Basehart.

The King and I (789) (C) (WS): Musical; Deborah Kerr, Yul Brynner.

War College Course Ready On International Relations

The Naval War College conducts a number of correspondence courses in addition to the studies undertaken by the resident students. These courses were first offered in 1914 and they have been administered by the College down to the present time. For some time it has offered correspondence courses in *Strategy and Tactics*, *Logistics* and *International Law*. Completion of these courses carries with it exemption from certain of the professional examinations for promotion of officers.

A new correspondence course in ***International Relations*** has recently been introduced.

This six-installment course is available to USN & USNR officers and provides an examination exemption for commanders being promoted to captain.

It is designed to cover the basic factors and forces affecting national strategy and international politics, the formulation and implementation of national strategy in the pursuit of national security objectives, and a survey of current U. S. foreign policy objectives and national security problems in various areas of the world.

Three New Courses for Officers Are Available from CCC

Three new officer correspondence courses are now available at the Naval Correspondence Course Center.

Industrial Relations, (NavPers 10733) is a 12-assignment course evaluated at 24 points credit for purposes of Naval Reserve promotion and retirement.

Aviation Operations, (NavPers 10755) is a 9-assignment course evaluated at 18 points credit. This course is classified and is ordinarily available only to active-duty personnel.

The third course is ***Power Generation and Distribution*** (NavPers 10753). This course is designed for officers of the Civil Engineer Corps. It consists of six assignments and is evaluated at 12 point credit for purposes of Naval Reserve promotion and retirement.

Application for enrollment should be made on form NavPers (Rev 10/54 or 2/56), forwarded via official channels to the Naval Correspondence Course Center, Naval Supply Depot, Scotia 2, New York.

Look For New Bluejackets' Manual and Division Officer's Guide in Revised Editions

New and enlarged editions of two invaluable guides to a successful Navy career—the *Bluejackets' Manual* and the *Division Officer's Guide* —are now in the works.

The Navy enlisted man's bible for more than 50 years, the *Bluejackets' Manual* (in its 15th edition) is scheduled for publication this fall. The second edition of the *Division Officer's Guide* has recently been published.

The *Manual* has been restyled and rewritten in an easy, more interesting and less formal manner. Information in some of the chapters has been brought up to date, while five new chapters and one new section on the most recent developments affecting the Navy have been added.

One of several books designed to aid the Navyman in his training, the *Manual* serves as a basis for much of a recruit's education. Later, it serves as a source book of general naval knowledge.

Nearly double the size of the first edition, the *Division Officer's Guide* reflects the increasing complexity of the Navy and of the division officer's place in the chain of command responsibilities, technological requirements and human relations. It also, of course, replaces obsolete material with the latest word from the cognizant offices of the Navy Department.

Both volumes are published by U. S. Naval Institute, Annapolis, Md.

Four Correspondence Courses Ready for Enlisted Personnel

Four new Enlisted Correspondence Courses are now available to all enlisted personnel.

Enlisted Correspondence Courses will be administered (with certain exceptions) by your local command instead of by the Correspondence Course Center.

If you are on active duty, your division officer will advise you whether the course for which you have applied is suitable to your rate and to the training program you are following. If it is, he will see that your application is forwarded to the Correspondence Course Center, which will supply the course materials to your command for administration.

Personnel on inactive duty will have their courses administered by the Correspondence Course Center, just as in the past.

The new or revised courses are:

Course	NavPers No.
Torpedoman's Mate 3, Volume 1	91300-1
I. C. Electrician 2	91529
Storekeeper 1	91432-1
Torpedoman's Mate 3, Volume 2	91296

The last roundup of Enlisted Correspondence Courses may be found in ALL HANDS, June 1956, p. 50. New courses will be listed as soon as they are available.

Correspondence Course Center Is On the Move — to Scotia

The Alma Mater of many a Navyman intent on furthering his career is no longer to be found in the ivy-covered Building RF, Naval Base, Brooklyn, N. Y. The halls of learning have been transferred to Naval Supply Depot, Scotia.

The move takes place this month. The new address will be:

U. S. Naval Correspondence Course Center
Naval Supply Depot
Scotia 2, N. Y.

From 14 June to 1 July the Center will be busy with its big move and operations will not approach normalcy until approximately 15 July.

While every effort will be made to keep the disruption down to a minimum, you must expect some delay in your correspondence. The delay you may experience in receiving graded assignments will do you no harm, as completions are recorded on the day you mail the assignment.

Seabees and CEC 'Can Do' and Did

Only the Seabees could think of—and carry out—the one-day construction of an island and all its military installations on a street corner in Honolulu. Approximately 225 "Can Do" men combined their efforts to erect the replica and tear it down in a joint observance of the Seabee and Civil Engineer Corps' 90th and 15th anniversaries, respectively.

The island, which included a road, an air strip, gun emplacements, a combat information center and a water purification system was, on a small scale, a realistic demonstration of the Seabees' famed combat construction work. Even a "Queen Bee" was crowned to add flavor to the "Navy Seabee and Civil Engineer Corps Day" proclaimed by the governor of Hawaii and mayor of Honolulu. The queen received a year's supply of honey as her royal reward.

The island was the work of the Seabees from Mobile Construction Battalion Nine, the Tenth Construction Brigade, Barber's Point Naval Air Station, Inactive Service Craft Facility and local Reserve Divisions 14-1 and 14-2. It was constructed at the corner of Piikoi and Ala Moana Blvd.

Bands from CinCPacFlt, the Fourteenth Naval District and the Marine Corps furnished music for the occasion. A Hawaiian hula troupe also entertained the spectators.

WHAT'S IN A NAME

The Lucky 'BV'

In the old days, when a ship ran into trouble on her maiden voyage, superstitious sailors thought it was a pretty bad omen. But, USS *Boulder Victory* (AK 227) had plenty of trouble on her first voyage, and yet the men who sailed her called themselves "the luckiest crew in Uncle Sam's Navy."

Originally built for the Maritime Commission, the "BV" was diverted to temporary naval auxiliary duty for the express purpose of carrying ammunition directly to the Fleet in forward areas. She first sailed from San Francisco, Calif., on 2 Nov 1944, loaded to the gunwales with 7000 tons of shells, shell charges, antiaircraft projectiles, rockets, fragmentation bombs and fuses.

At sea, she soon hit rough weather, which caused some of the explosive cargo to break loose. For about 48 hours shells rolled about, crashing into each other and bouncing off the bulkheads before the crew could get them secured again. A real omen hunter might have been frightened by this "bad sign," but it was nothing compared to the scare that awaited the BV.

On 20 Dec 1944 she was just getting underway in Kossol Passage, Palau Islands, when a terrific explosion shattered the quiet of early dawn and threw up a cloud of spray and debris from No. 3 hold. The ship had either hit a mine or been torpedoed by a midget submarine.

The blast put out the lights and seemed to lift the BV out of the water and hurl her against a stone wall.

Then the black gang sprang to the emergencies, the lights flickered on again and the ship moved through the water with black smoke pouring from her insides, but the second blast never came.

Four men who had been working in No. 3 hold scrambled out. Others dragged out hoses and began pouring water onto the smoking cargo.

Finally, when the danger of fire was over, sailors rushed up handy-billy pumps to add to the main pumps trying to empty the flooding hold. They soon realized they were trying to pump out the whole Pacific Ocean. Two hours later, Alfred V. Belfin, MM2, donned a makeshift diving mask and plunged into the hold to survey the damage. The water was coming in through a jagged, 18-by-35-foot opening in the hull. Unexploded 5-inch projectiles had been imbedded in the T-beams, explosive powder from split casings was blackening the water. Later, two 16-inch holes were also discovered, indicating that some shells had gone off in the initial blast. Yet, for some reason the cargo had not exploded and not a man had been hurt.

For the next two months the battered BV remained in Kossol Passage, cleaning up debris and transferring some of her undamaged ammunition to other ships. On 13 Feb 1945 she moved on, still damaged and still carrying three-fourths of her original cargo.

In the Admiralty Islands she unloaded the rest of the ammunition and was placed in a floating drydock for temporary repairs. She then sailed for San Francisco, where she finally wound up her maiden voyage on 30 Jun 1945.

The luckiest crew and the luckiest ship in the whole U. S. Navy had come home.

Navy Relief Society Gave More Aid to Navy Families in '56

The Navy Relief Society provided 20 per cent more financial assistance during 1956 than in 1955, according to the Society's 1956 annual report.

Other statistics in the report indicated that the aid given last year was more than any other year with the exception of the war years of 1944 and 1945, when the Navy's personnel strength was 3,500,000 as compared to the 970,000 now (including Marines).

There were fewer service cases (those involving no financial assistance) than in 1955. This type of service includes consultation such as information and advice on personal and family problems. The total number of such cases was 48,238 during 1956. The report suggested that the decrease from the preceding year could be attributed to the increased importance of the family emphasized by the Navy. The result has been more personal affairs offices which have taken care of such problems.

A 40 per cent increase was noted in the number of cases calling for assistance by outright grants and conversion to grants. There were 9,415 cases in this category for which the Society spent $690,682.

There was a 13 per cent rise over last year in the amount loaned for emergency assistance; aid in this form amounted to $4,150,462 which went to 61,943 cases. These figures are the largest ever recorded for emergency loans in peacetime history; they were just slightly under the amount for 1944, a war year.

Repayment of loans for 1956 amounted to $3,475,079 which is 84 per cent of the loans made during the year.

Uncollectable loans amounted to $204,244 which is slightly higher than the figure during the preceding year. The loans which are written off as uncollectable are for the most part unpaid balances of loans outstanding at the time of discharge.

Total expenditures for other than direct relief amounted to $757,370, an increase of $102,513 over last year. The greatest area of this spending was that of expansion of service programs.

The Society received $1,218,914 in contributions during 1956, a $127,016 increase over 1955. Funds are received from the "Annual Call for Contributions," and from the proceeds of sporting events, carnivals, balls and other fund-raising projects.

Recognition for the Outstanding Men in Your Crew

The most talented men in the Navy—those who are truly "outstanding"—are the ones who will, in the opinion of the Chief of Naval Personnel, be most severely penalized if marks in the new Enlisted Performance Evaluation System are not awarded realistically. Divisional petty officers and all others in the chain of command are cautioned of this possible result.

Early evaluations indicate that many individuals who are, in reality, of average caliber have been marked as outstanding.

That isn't the idea at all. It stands to reason that, if your work or personal characteristics are *really* outstanding and the men in your division who are just average are also marked "outstanding," you are not going to receive the credit you deserve.

It is recognized that one of the difficulties of the earlier system was the custom of marking almost everyone as high as possible because it was felt by many that any lesser mark was, in effect, a derogatory comment.

That is why, says the Chief of Naval Personnel, it is necessary to award marks with complete objectivity. If, in your opinion, you think a man does average work, say so. It will do him no harm. If you think he could do brilliant work but doesn't try, say that. If, after due observation, you come to the conclusion that he tries hard but is not bright enough to do his job properly, it's your responsibility to pass the word. At least he'll get credit for trying.

If one of your men—a good solid worker, reliable, and a good Joe—gets fighting drunk after one or two beers, do you want to bear the responsibility of seeing him assigned to a position where he can cause the Navy—and himself—great embarrassment? An appropriate remark on his record might not interfere with his advancement, but it might prevent him from being assigned to a spot—say, a MAAG—where he might get into serious trouble. In other words, a complete report which mentions his weak as well as strong points, will benefit everyone.

If you want to be a good fellow and mark all the men in your division as "outstanding," what about the bright earnest lad who really is outstanding? How much of a favor are you doing him? None. You are, in fact, injuring his chances of receiving the recognition he really deserves.

All these factors are what the Chief of Naval Personnel had in mind when he told ALL HANDS:

"The success of the Enlisted Performance System depends upon the conscientious and objective evaluation of individual performance by all who have a responsibility for making evaluations. The evaluation of each individual according to his own merit will result in the greatest possible benefit not only to the Navy but also personally to those who are most deserving."

Navy Sponsors Candidates For Rhodes Scholarships

Regular Navy and Marine Corps officers and midshipmen of the Naval Academy (classes of 1957 and 1958) who can meet the academic and military requirements are eligible to seek Navy sponsorship in the Annual Rhodes Scholarship competition for study at Oxford University in 1958, according to BuPers Notice 1520 dated 27 Mar 1957.

Eligibility requirements are established by the Rhodes Trustees and the Chief of Naval Personnel.

Applications for Navy sponsorship are to be submitted to the Chief of Naval Personnel. Those who enter the competition and are successful in winning a scholarship will be ordered to Oxford University in an active-duty status until their scholarship expires.

Endorsed applications must reach the BuPers prior to 2 Sep 1957.

Assignment of Codes for Enlisted Ratings Changed In New Classification Manual

The use of classification codes will be simplified by a streamlined *Manual of Navy Enlisted Classifications* (NavPers 15105-A), scheduled for distribution by the end of June.

The biggest change in the new manual is the omission of most of the overlap between the Navyman's rate and rating and his classification codes. At present you carry as your most important code one that describes a duty associated with your rating. Your secondary code may also fall within your own rating or in some other rating or special area.

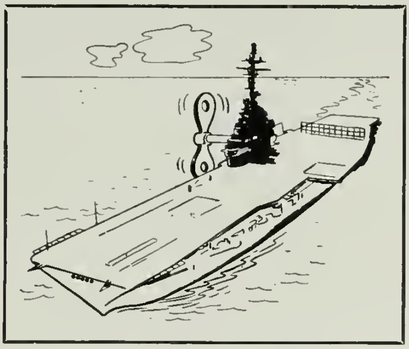
In the new manual it is not intended that codes repeat information supplied by rating and pay grade. Hence, many men will substitute an additional code for a code they now carry.

A Boatswain's Mate, for example may now carry as his primary code, BM-0102 Deck Petty Officer. His secondary code may identify almost any skill useful to the Navy such as QM-0215 Harbor Pilot or 9551 Filling Station Manager. Since all Boatswain's Mates are qualified deck petty officers, under the new concept the Deck Petty Officer code is unnecessary. Instead, the Boatswain's Mate can now pick up the QM-0215 code as his primary code and his secondary code can reflect an additional skill.

Because a ship is limited in the number of men it can accommodate, every man performs multiple duties. In addition to his occupational tasks, he is also responsible for watch and battle station duties. His occupational tasks might be cooking, carpentry, watch repairing, or welding. But in time of emergency these tasks assume a lower priority. When the general alarm sounds, every man takes his battle station and the entire crew become combat personnel.

The new manual emphasizes the importance of Navy enlisted classification through the necessity of identifying additional skills beyond the ratings of the men aboard. NavPers 15105-A records every useful skill where it can be readily identified and utilized.

The revised manual represents extensive research work to bring the classifications up to date with new technological developments in the Fleet such as the use of nuclear weapons. It differs from the old manual in the reduced number of classifications and criteria. More than 1000 classifications have been dropped, simplifying the use of classification codes.



" . . . and I thought I joined the atomic Navy!"

USNR and Temporary Officers Selected for Transfer to USN

The names of 178 Naval Reserve and temporary officers have been recommended for permanent appointment in the Regular Navy by the Augmentation Continuing Selection Board convened in the Bureau of Naval Personnel.

Of the selectees, 147 are line officers with two of these in the Restricted Line. Thirty-one are in the Staff Corps.

Numbers to receive appointments, provided they meet all administrative requirements, are: Line, 59; Line Women, 10; Aviation Line, 76; Special Duty Law, 2; Supply Corps, 13; Chaplain Corps, 5; Civil Engineer Corps, 4; Medical Service Corps, 2; Nurse Corps, 7. The augmentation of officers into regular Navy is a continuing program.

HU SWU VU FAW VAW GMU? You Can Say That Again!

In the June 1956 issue of ALL HANDS, on page 57, we described the U. S. Navy aircraft designations and how they were derived.

The designations and abbreviations of naval aviation groups are listed below as an aid in identification, since these activities are often a source of confusion to those not closely associated with them. You may be reasonably familiar with such abbreviations as FASRon, TACRon and VA, but if you know these, you probably do not know the meaning of GMGru, GMU and VAP. And vice versa.

In any event, here's the list as it was prepared by OpNav at press time:

CVG	Carrier Air Groups
FAETU	Fleet Air Electronics Training Unit
FASRon	Fleet Aircraft Service Squadron
FAGU	Fleet Air Gunnery Unit
FAIRShipWing	Fleet Airship Wing
FAW	Fleet Air Wing
FAWTU	Fleet All Weather Training Unit
GMGru	Guided Missile Group
GMU	Guided Missile Unit
HS	Helicopter Anti-Submarine Squadron
HU	Helicopter Utility Squadron
SWU	Special Weapons Unit
TACGR	Tactical Air Control Group
TACRon	Tactical Air Control Squadron
VA	Attack Squadron
AEWMatRon	Airborne Early Warning Barrier Maintenance Squadron
HATWing	Heavy Attack Wing
HATU	Heavy Attack Training Unit
VA(AW)	All-Weather Attack Squadron
VAH	Heavy Attack Squadron
VAHM	Attack Mining Squadron
VAP	Heavy Photographic Squadron
VAW	Carrier Airborne Early Warning Squadron
VF	Fighter Squadron
VF(AW)	All-Weather Fighter Squadron
VFP	Light Photographic Squadron
VP	Patrol Squadron
VQ	Electronic Countermeasures Squadron
VR	Air Transport Squadron
VS	Air Anti-Submarine Squadron
UTWing	Utility Wing
VU	Utility Squadron
VW	Airborne Early Warning Squadron
VX	Air Development Squadron
ZP	Airship Squadron (LTA)
ZW	Airship Early Warning Squadron
ZX	Airship Development Squadron

Antigua, BWI, Is Another Garden Spot on the Navy Duty Roster

Duty is where you find it and, although Antigua, British West Indies, will never approach San Diego or Norfolk quantitatively, living conditions to those assigned to this garden spot of the Caribbean (they're all garden spots) are just as important as to those who pull duty in the bigger stations. We've never been there ourselves. However, reports indicate that duty is pleasant but facilities a little primitive. Here's the report:

Availability of Housing—There is no government housing available. Private housing is available but in scarce supply. Rents range from $60-$120 a month and the houses are usually furnished. There is no waiting period but you should find your housing before your family arrives.

Household Goods — Inasmuch as most houses are furnished, you will need only those items that are considered necessities, that is, linens, towels, electrical appliances, etc. There are very few of these available in local stores and if available, they are high in price. The individual house rented will determine what other furniture is to be shipped but all furniture should be of such a nature as to stand tropical climates.

Servants — Servants are available but vary in the amount of training and experience. They receive $3-$5 a week plus some food, and most of the houses have quarters for servants.

Automobiles — There is no adequate commercial transportation available so privately owned automobiles should be brought. A smaller car would be advisable since all roads are designed for the smaller type cars. There are no parts available for American cars; however, mechanics are generally good. Gasoline is 46¢ an imperial gallon. All drivers drive on the left.

"Loathes green cheese."

In the sale of an American car, there is a 39 per cent duty on the value, and upon entering the island a 15 per cent bond must be posted against this duty.

Clothing—Lightweight clothes are a must and should be brought with you since most items are not readily available. Formal clothes are highly desirable. Yard goods are available and seamstresses and tailors are fair.

Laundry and Dry Cleaning—There is a laundry for naval personnel but it may not be available at the times you want it. Otherwise, all clothes are washed by individual laundresses by hand. Dry cleaning is poor and, if possible, clothes that require dry cleaning should not be brought.

Food—It is not known whether the naval Facility will have a Commissary Store. If not, local food is adequate but expensive. Some American brands of food are available but most are from within the British Empire.

Schools—No public schools are available. There are private schools in St. Johns, patterned after the English private schools. The level of instruction for elementary age children is satisfactoy but is out of phase with American school practices. Young children (6-12) will have difficulty adjusting themselves for a while.

High school children cannot attend satisfactory schools. It is suggested that these children make arrangements for correspondence or extension type courses.

Medical and Dental Care—Local doctors and medical facilities are adequate for all conditions up to major surgery. The hospital is clean and well staffed but is somewhat lacking in equipment and associated services.

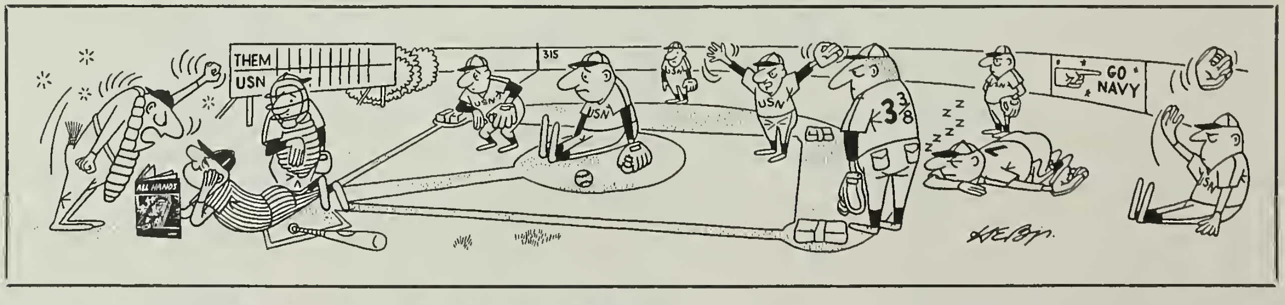
Adequate dental care can be obtained but it is recommended that all teeth be repaired or treated before leaving the States.

Religious Activities—The predominant denominations are Roman Catholic, Anglican and Methodist. All hold services regularly in St. Johns, and Navy personnel are welcome.

Recreational Facilities—The following recreational facilities are available: bathing, golf, tennis, boats, etc. There are no night clubs and only one movie—which is excellent for this area.

Currency and Banking—Local currency is the British West Indies dollar which is pegged at $4.80 to the British pound. The value in American dollars fluctuates from 1.68-1.71 as the value of the pound varies. Two banks offer complete banking services including checking accounts, savings accounts and conversion of currency.

Local authorities prohibit entry of pets of any type.



PLAY BALL — There are nine other men out there waiting for this copy of ALL HANDS — PASS IT ON.

DIRECTIVES IN BRIEF

This listing is intended to serve only for general information and as an index of current Alnavs and NavActs as well as current BuPers Instructions, BuPers Notices, and SecNav Instructions that apply to most ships and stations. Many instructions and notices are not of general interest and hence will not be carried in this section. Since BuPers Notices are arranged according to their group number and have no consecutive number within the group, their date of issue is included also for identification purposes. Personnel interested in specific directives should consult Alnavs, NavActs, Instructions and Notices for complete details before taking action.

Alnavs apply to all Navy and Marine Corps commands; NavActs apply to all Navy commands; BuPers Instructions and Notices apply to all ships and stations.

Alnavs

No. 9—Stated that an excessive amount of official mail was being inadequately wrapped and recommended corrective procedures.

No. 10—Announced resignation of Secretary of Navy Charles T. Thomas in his farewell message to all naval personnel.

No. 11—Announced the shift of the Aviation Officer distribution function to the Chief of Naval Personnel.

No. 12—Announced that Thomas S. Gates, Jr., had taken the oath of office as Secretary of the Navy.

No. 13—Announced the discontinuation of VA Form 9-5782 "Request for Information/Action on Section 622 Waiver," as of 1 May.

No. 14—Concerned with contributions to the Navy-Marine Corps Memorial Stadium Fund and announced the names of ships and activities leading in such contributions.

No. 15—Requested aviation officer volunteers for the 1957-58 Antarctic Expedition. Established a deadline of 1 May for such nominations.

No. 16—Announced the convening of a selection board to recommend for promotion warrant officers in certain grades.

Instructions

No. 1120.3E—Outlines the requirements and method of application for appointment of USNR medical officers in USN Medical Corps or Dental Corps.

No. 1133.8A—Provided instructions regarding the reenlistment of inducted personnel and their voluntary retention on active duty beyond the period for which inducted.

No. 1301.28—Contains information concerning the assignment of officers to nuclear submarines and sets forth procedures whereby interested officers may apply for assignment to the Advanced Nuclear Power Course convening at New London, Conn., in January and July.

No. 1331.2B—Requests applications from junior officers including Waves who wish assignment to the Naval Security Group for a tour of duty.

No. 1520.20A—Establishes eligibility requirements and invites applications for heavier-than-air flight training from commissioned officers and officer candidates.

No. 1520.48A—Announces a new college-training program for eligible augmented and integrated USN commissioned officers of the line, but not restricted line, and Supply Corps officers with a permanent grade of ensign and above.

No. 1540.27A—Announced the current practice governing heavier-than-air and lighter-than-air integration program.

No. 1750.5A—Establishes the Uniformed Services Identification and Privilege Card (DD form 1173) and provides instructions governing its administration.

No. 1910.11A—Revises provisions for the early separation of certain personnel serving on active duty in order to improve the over-all quality of Navy enlisted personnel.

No. 1910.12A—Modifies the program of early separation of enlisted personnel for the purpose of commencing or resuming college education.

No. 4650.6B—Informs all naval personnel ordered to duty in Japan of policies concerning concurrent travel and to acquaint those individuals with the housing situation in Japan.

"You and your house warming party!"

No. 5510.3F—Announced revised procedures and security restrictions for personnel ordered to duty under instruction in schools and courses for which a security clearance is required.

Notices

No. 1210 (25 February)—Invited applications from certain permanently commissioned line officers and USNR officers on active duty for transfer to the USN Civil Engineer Corps.

No. 1111 (28 February)—Announced the list of USN and Marine Corps active duty enlisted personnel provisionally selected for enrollment in the NROTC program.

No. 1520 (1 March) — Announced Change No. 1 to BuPers Inst. 1520.20A which is concerned with qualifications for heavier-than-air flight training.

No. 1520 (4 March)—Announced the convening dates of the U.S. Naval School (Naval Justice), Newport, R. I., for senior officers.

No. 1120 (7 March)—Announced Change No. 1 to BuPers Inst. 1120.15B, which is concerned with the procurement of personnel for appointment to ensign, Medical Service Corps, USN.

No. 1611 (7 March) — Established policy related to the fitness reports on active duty officers in command or in charge.

No. 1531 (14 March) — Requested nomination of candidates for assignment to the U.S. Naval Preparatory School, Bainbridge, Md.

No. 1616 (19 March) — Provided additional guidance to commanding officers concerning the criteria to be used in evaluating the performance of enlisted personnel.

No. 1221 (20 March) — Announced additions to Change No. 5 to Manual of Enlisted Classifications (NavPers 15105 Rev.)

No. 1440 (20 March) — Established procedures for completing changes in rating affecting reservists and Fleet Reservists on active duty in the Fire Control Technician, Draftsman, Air Controlman, Tradevman and Parachute Rigger ratings.

No. 1440 (20 March) — Announced Change No. 1 to BuPers Inst. 1440.5B (concerned with changes in rate and rating) to provide guidance concerning the recommendation of foreign nationals for change in rating to Signalman, Boilermaker and Nuclear Weaponsman ratings.

No. 1306 (22 March) — Announced Change No. 1 to BuPers Inst. 1306.62, which is concerned with Sea/Shore rotation of enlisted personnel.

No. 1120 (26 March) — Announced selection of warrant officers and USN enlisted personnel for training leading to a commission in the Regular Navy.

No. 1510 (26 March) — Emphasized the necessity of returning Enlisted Correspondence Course text material.

No. 1520 (27 March) — Provided information and procedure regarding participation of commissioned Naval and Marine Corps officers and Naval Academy midshipmen the annual Rhodes Scholarship competition.

QUIZ AWEIGH ANSWERS
QUIZ AWEIGH IS ON PAGE 33

1. **(b) Spanish Navy**
2. **(a) Antiaircraft cruiser**
3. **(c) France**
4. **(b) Captain (junior)**
5. **(a) Commander**

No. 1741 (28 March) — Announced the requirement for public liability insurance as a condition which must be met before a permit to operate a motor vehicle on a military installation may be issued.

No. 5101 (29 March) — Announced suggestions for command use in connection with Navy Traffic Safety Program for off-duty military personnel.

No. 7220 (3 April)—Emphasized necessity of compliance with the provisions used in determining the existence of extraordinary hazardous diving conditions.

No. 1910 (9 April)—Provided instructions governing separation of selectees who entered the Navy during November and December 1955 through the Selective Service System.

No. 1410 (10 April)—Provided interim qualifications for advancement in rating to certain pay grades for the newly established general service rating of NW.

No. 1120 (11 April) — Announced the selection of applicants for temporary appointment to the grade of ensign, USN, for limited duty officer and warrant officer.

No. 1900 (12 April) — Announced Change No. 1 to BuPers Inst. 1900.2, which is concerned with armed forces report of transfer or discharge.

No. 1000 (16 April) — Announced Change No. 1 to BuPers Inst. 1000.7A, which describes programs and opportunities available to naval personnel.

No. 1510 (19 April) — Announced the selection of enlisted personnel for the Naval Enlisted Advanced School program of 1957 and requested applications for the 1958 program.

No. 1223 (25 April) — Announced Change No. 3 to BuPers Inst. 1223.1, which is concerned with the Selective Emergency Service Rates program.

Course in Combat and Field Medicine Practice Is Revised

The Medical Department correspondence course in ***Combat and Field Medicine Practice*** (NavPers 10706-A) has been completely revised, and is now available for enrollment. This course replaces the earlier NavPers 10706. The course covers management of battle casualties, traumatic shock, medical aspects of tropical warfare and warfare in extremely cold climates.

Presented in four assignments, the course is evaluated at 16 points credit for Naval Reserve personnel.

Application for enrollment should be made on Form NavPers 992 (revised 10/54 or later) with appropriate change in the "To" line, forwarded via official channels to the Commanding Officer, U. S. Naval Medical School, National Naval Medical Center, Bethesda 14, Md.

Great Lakes Chanteymen Carry On an Old Tradition

"Sing me a chantey with a yo-heave-ho!" These days, that salty old phrase is likely to get results at the Naval Training Center, Great Lakes, Ill., for the Chanteymen, Great Lakes' newest singing group, are doing their best to keep alive the old work songs and ballads of the sea.

The group is under the direction of E. David Stivender, SN, USN, who arranges all its music. The organization was conceived by Captain A. C. Burrows, USN, Commander of the Training Center, who has long felt that chanteys should be sung rather than bound together in neglected collections of folk songs. When he came to Great Lakes he requested the organization of a male chorus to sing these rousing old tunes.

The chorus is made up of 25 Ship's Company and Service School men, who rehearse Monday through Friday each week. Several of its members are soloists. Dwight Shupe, SA; E. Allen Elliott, SN; and John Barthelmy, SN, hold key solo spots. Charles Straub, YN3, sings one of the group's most popular numbers, "Black is the Color of My True Love's Hair." The entire program is unaccompanied, so the Chanteymen can sing anywhere any time.

Since they were organized in November 1956 they have appeared at the Junior Achievement Trade Fair in Chicago, Ill., at the boat shows in Chicago and Minneapolis, Minn., and, of course, at the Naval Training Center.

Chaplain R. J. Gentile, permanent officer in charge, travels with the group on all its concerts and does the announcing and narration at its shows.

BOOKS

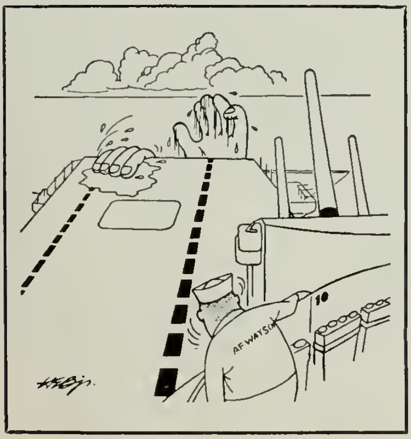
NAVY LORE PREDOMINATES THIS MONTH'S SELECTION

Fans of naval literature have a wide choice in this month's books selected by the Library Services Branch for review. The ones described below, and many others, may be found on the shelves of your ship or station library.

Quest For A Continent and **Operation Deepfreeze** tell, of course, of our present-day exploration of the Antarctic.

Operation Deepfreeze, by RADM George J. Dufek, USN, gives the story behind the news of the most extensive polar expedition in history. Admiral Dufek is Commander U. S. Naval Support Force Antarctica, better known as Task Force 43. He tells of our part of the carefully planned operations by 12 nations to open the frozen frontier of the world's last continent during the International Geophysical Year. Here are the stories of those who spent the dark winter night nearly buried in snow, of planes that discovered vast new territory in starkly beautiful Antarctica, of ships that outraced giant icebergs to reach safety, of planes that were lost and of the men who found them. Veterans of the Deepfreeze expedition can point to passages in the book, nod and say: "Yup. We were there." Their shipmates can check up on some of the tall sea (and ice) stories they have been hearing.

Quest For A Continent by Walter Sullivan, has a similar subject matter but uses a different approach. It tells of the great land mass at the bottom of the globe from the first discoveries of its existence in the 18th Century to details of the present IGY expeditions. In addition to the by-now-familiar history of exploration, Sullivan also describes the Antarctic physical features—the varieties of ice, of whales, seals and birds—as well as the theories concerning the shrinking of the ice and the continental drift, and the advance or retreat of the glaciers.



Day of Infamy, by Walter Lord, and **The Enemy Below,** by D. A. Rayner, take us back to World War II. The former story tells, from the viewpoint of both United States and Japanese participants, what happened on Sunday, 7 Dec 1941, and the relevant events which preceded that day. From the Japanese angle, the author describes the work of Japanese intelligence for months and years before the fatal day; the suspense faced by the planners of the attack and by the crews and pilots on board the carriers and service forces; details of the attack as seen through Japanese eyes. He tells, too, of the shocked incredulity of U. S. Navymen and their families on that quiet Sunday morning—of the heroism, courage and anger as men sprang to their guns to face disaster. The author will be remembered for his comparatively recent *A Night to Remember*, a story of the sinking of the *Titanic*.

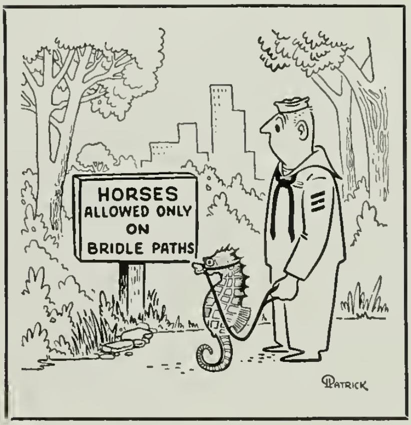
The Enemy Below, the single item of fiction selected for review this month, concerns a single combat between a destroyer and submarine, and between skippers of equal skill. Navymen concerned with the destruction of enemy submarines and submariners themselves will find a professional, as well as personal, interest in the description of depth charge versus torpedo, of destroyer against sub, of crew against crew and captain against captain.

Three excellent choices will brighten the hearts of Civil War fans. All three, **Tin Can on a Shingle,** by William C. and Ruth White, **Ghost Ship of the Confederacy,** by Edward Boykin, and **Lincoln's Commando,** by Ralph J. Roske and Charles Van Doren, are also concerned with either Union or Confederate Navy lore of that time.

Tin Can reviews the career of the North's *Monitor*, which was built in 152 days, lived 11 months, and introduced a new means of warfare. It's a good basic story and the Whites tell it well. They describe the panic which swept the North at the tales of the impregnable *Merrimac,* of the hurried construction of the *Monitor* and its dash to Hampton Roads to protect the remnants of the slaughtered Union Fleet. All the dramatic elements are there: The worn and exhausted *Monitor* men facing a ship four times larger than theirs, with 10 guns to their two, with unknown hazards in firing and maneuvering, and the fate of the Union's Fleet to be determined by their courage.

Lincoln's Commando, which is the biography of CDR William B. Cushing, USN, continues in a sense the battles of the ironclads, for one of Cushing's most noted exploits was the sinking of the Confederate ironclad *Albemarle.* From the time of his entrance into Annapolis at the age of 15 as a naval cadet through his appointment as commander at 31, his career seemed to consist of a series of such incidents, including the fabulous attacks on Forts Fisher and Anderson, which opened the way to the last major Confederate port of Wilmington, N. C. The name of one of the co-authors may be familiar to certain quiz program fans.

As might be suspected, *Ghost Ship* presents the Confederate side of the conflict. In this case, it is the story of Raphael Semmes and his raiding cruiser *Alabama.* As most naval history fans know, Semmes first sank, burned or captured some 18 Yankee merchantmen with his small makeshift cruiser *Sumter*, then went on to create greater devastation to the tune of 69 Northern merchantmen with *Alabama* until it finally sank beneath the guns of USS *Kearsarge* in the English Channel.



NAVY'S ROLE IN RADIO

The Navy's vital part in the development of radio communications dates back to the late 19th century. Navymen, ships and units ashore played a role. This is the story.

The following special report is excerpted from "The Navy's Role in the Development of Radio," appearing in the publication Signal, *Vol. XI, No. 1, September-October 1956. The article was written by Captain Gordon L. Caswell,* USN, *Assistant Director of Naval Communications.*

LAST SUMMER a nostalgic ceremony, which marked the closing of "Radio Arlington," took place. Known to old-time radio amateurs and operators throughout the world as NAA, this station had been in continuous operation for 43 years, and was the Navy's—and the world's—first modern, high-power radio station.

RADIO controlled *USS Iowa* was test ship. *Above: USS Northampton* (CLC 1) modern communications ship.

"Radio" is now so universal in its application that its youth is nearly forgotten and, although it is generally recognized that the U. S. Navy had a dominant part in the development of radio in the United States, it is probably not realized to what extent this nation is indebted to the Navy's pioneering and continuing efforts in the development of radio. The history of radio development in the Navy is also the history of radio development throughout the world.

The Navy's role in the development of radio communications equipment and techniques, bracketing voice broadcasting; remote control of ships, as targets, which led to the guidance of missiles; the pioneering of radio-controlled aircraft known as "drones;" the conduct of radio communications within the United States and throughout the world; the allocation of radio frequencies among nations; the Navy's assistance to what is now known as the Federal Communications Commission; the elimination of foreign radio operations from United States soil—was once big news now largely forgotten.

THE NAVY'S MOTIVATION is obvious. For centuries the navies of the world depended upon communications within visual range. The Navy reasoned: If radio would only work, its signals could penetrate darkness or fog, and bridge great distances, and its adaption and development would accomplish a new era in sea power, through coordination in the movement and action of widely dispersed units.

The Navy got its start so early that Navy interest in radio at least coincided with, if it did not precede, Marconi. Guglielmo Marconi was issued his first patent for a wireless communications device on 2 Jun 1896. A document in the possession of Tufts College attests to

SECNAV J. Daniels made history when he talked by radio-telephone from office to *USS Nebraska* off Virginia Capes.

the successful experiments in shipboard radio of Lieutenant Bradley A. Fiske, USN, (later Rear Admiral) before 31 Aug 1888. According to that evidence, RADM Fiske, as a lieutenant, "wound a number of turns of insulated cable around USS *Newark* lying at the New York Navy Yard, and likewise around the Navy Yard tug." He sent interrupted current to *Newark's* coil and listened on the tug with a telephone receiver in series with the coil system. Said this Navy officer: "I could get signals a short distance away . . ."

In 1888, the year of the Fiske document, Marconi was a teen-age boy 14 years old. Marconi's patent was issued eight years later.

IT WAS ON 30 Sep 1899 that the first official Navy message was sent via telegraph.

The transmission was accomplished during a naval parade in honor of Admiral Dewey who had just returned from his memorable victory in Manila Bay. The message was sent from *Conce* to the Highland Station on the Jersey Coast.

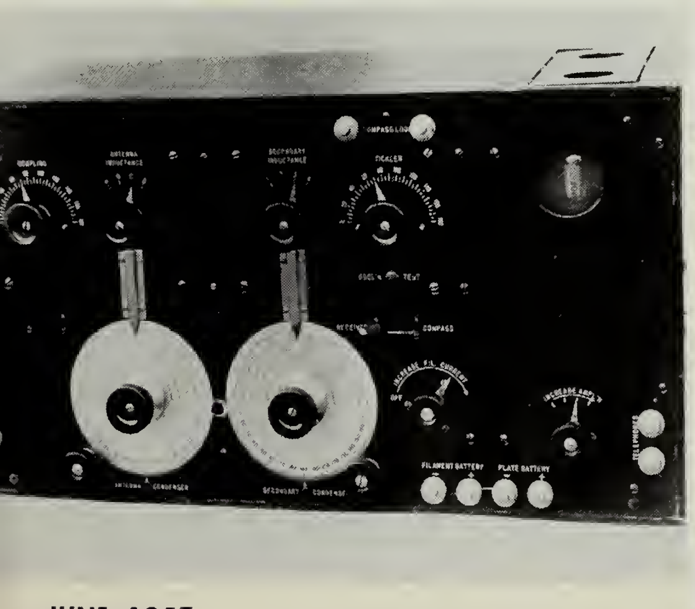
From that experience with radiotelegraphy, it was evident to a Navy observer present that the Marines who had recently fought at Guantanamo Bay, Cuba, the previous year, could have directed the fire of Navy guns on the enemy, lessening the danger to American forces and increasing the effectiveness of Navy fire, if the Navy and Marines had been able to use radiotelegraphy at Guantanamo. Fighting in Cuba was now over, but two great wars were in America's future, the first to come only 20 years later. The Navy recognized radio as a new weapons system and applied it to ships of war.

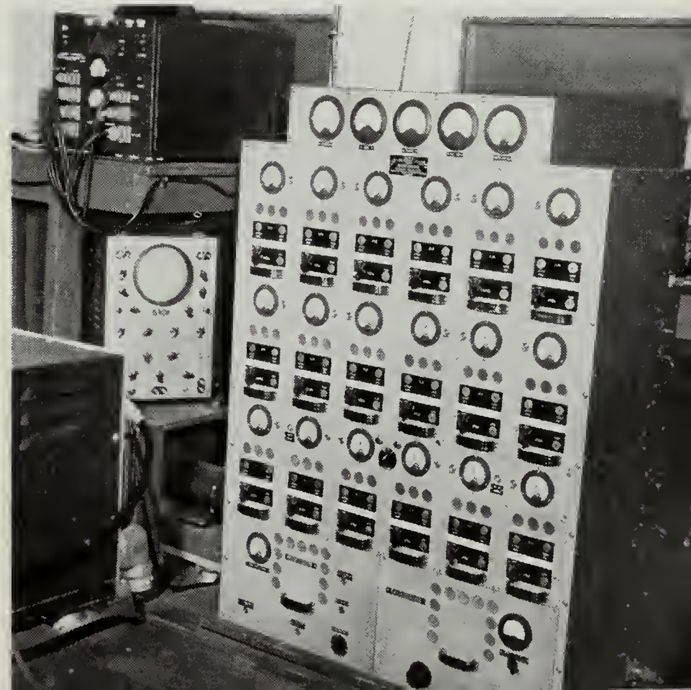
Before the turn of the century, the Navy invited Dr. Marconi to apply his new wireless telegraph system to USS *New York, Massachusetts,* and *Porter*. By 1916, the Secretary of the Navy, Josephus Daniels, was talking from his desk in Washington, D. C., with a moving offshore ship of the Fleet by telephone. But already, in 1901, the United States Navy had outfitted all of its major ships with communications equipment.

THE NAVY KNEW that the Age of Radio had arrived; that radio was a formidable new weapon which should be developed to its maximum utility; that future wars would be fought differently from past wars; that if nothing else would make them different, radio alone would.

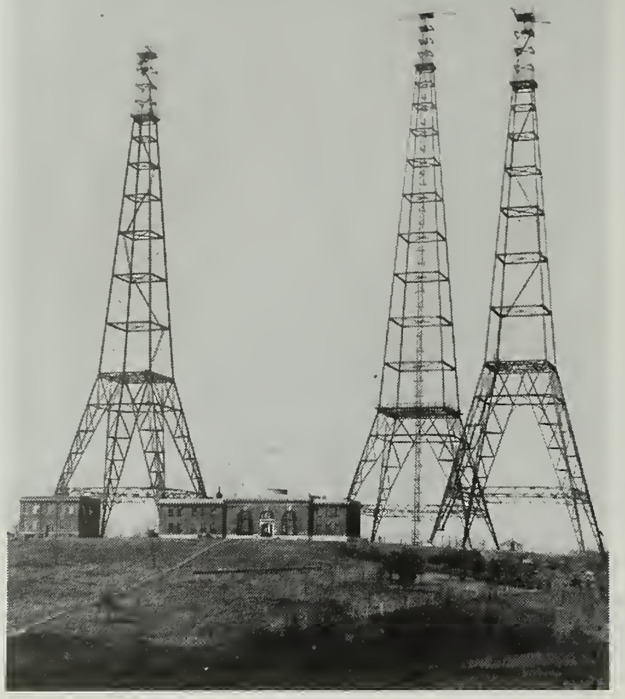
Now, almost single-handed, the Navy proceeded with the development of radio while skeptics laughed and many others totally underestimated the potential of an invisible radio wave. However, by 1908, one-half of all the "wireless" stations in the world were operated by Navy personnel. Such was the world leadership of the Navy in the new science of radio communications. By 1908, also, the Navy had established the Navy Radio Laboratory (predecessor of the Naval Research Laboratory) to conduct radio communications research.

While many others were just awakening to the possibilities of radio-telephony, the Navy was active in aiding its development. In 1906 Navy tests with the





FIRST radio was installed by Navy at White House in '20's. *Right:* Navy electronic telemetering used 25 years later.



HIGH IN THE SKY reach towers of Navy's first radio station. *Below:* Old photo of Navyman at 'Radio Arlington.'

Poulsen-type modulated arc transmitter were made on a number of ships; and by 1909 USS *Connecticut* and *Virginia* were equipped with "wireless" telephone equipment for experimental use during the cruise of the old White Fleet.

Radiotelephony actually came of age in 1915, when NAA succeeded in completing the first trans-oceanic radio-telephone circuit in history. This was followed by similar unprecedented overseas voice transmissions by the Navy from Virginia to the Hawaiian Islands.

Less than two years later and before World War I ended, the Navy had in operation the most extensive radio system in the world. The Navy radio communications system had progressed to such a point that it not only handled messages of the United States naval forces on the seas, but also those between the War Department and the American Expeditionary Forces in France.

In this same period, 1917, the Navy developed the radio beacon, and made the first such installation at Point Judith, R. I.

It was also from the antennas of the Naval Radio Station at New Brunswick, N. J., that President Wilson's historic "Fourteen Points" were transmitted from the United States and received at Nauen, Germany; and it was by the Navy radio station at Otter Cliffs, Bar Harbor, Maine, at 2100 on the night of 6 Oct 1918, that the first German Peace Note was received from Nauen, which was followed by the Navy's receipt of the second German Peace Note at 1542 on 12 Oct 1918.

UNTIL THIS TIME, laws and regulations governing radio were in a chaotic state. This was true in the international area as well as local. Foreign countries and foreign business interests were at liberty to "invade" any area which they considered might be profitable and, as a result, many had radio stations operating within the United States. All cables were owned by a single company—foreign-owned.

Such a situation was not in the best interests of the United States. It was the Navy which, in 1919, took the lead in eliminating foreign radio operations from U. S. shores and which proposed setting up a wholly United States-owned international radio company—which is today one of the largest radio corporations in the world. It was this Navy-conceived, privately-owned corporation which, with naval encouragement, succeeded in buying out foreign interests and dissolving their radio operations on U. S. territory.

The year 1919 was also fruitful in the technical areas. By that time, the Navy was successfully transmitting radio voice communications from air to ground and ground to air and a year later, radio voice communications were successfully exchanged between a U. S. Navy flying boat and a partially submerged submarine, an accomplishment of great importance to the future operations of the Navy.

AS FOR RADIO BROADCASTING, the Navy's broadcasting station at Anacostia was the first broadcasting station in the Nation's Capital, and except for very early experiments, was one of the very first broadcasting stations in the United States. Anacostia was such a pioneer in the history of broadcasting that its LAST important broadcast was the FIRST broadcast in history of the President's message to Congress, that of Warren G. Harding in early December 1922.

The Navy's early projects in the development of radio control led to radio-controlled target ships. *Iowa* was equipped for radio control in 1923 and was soon followed by a destroyer which was similarly equipped. These ships were used as targets for gunnery practice in the Fleet. The Navy had already begun work about this time on pilotless target aircraft known as "drones" and in the next year, 1924, radio remote control of aircraft was successfully accomplished.

Between 1920 and 1925, development had increased to such a degree that earlier, tentative plans for allocation of the frequency spectrum were obsolete. As a result, the then Secretary of Commerce called several national radio conferences at which the Navy recommendations which gave both government and commercial interests their own bands were ultimately accepted.

The Navy's proposals meant a sacrifice of its own slice of the spectrum, but the growth of private industry broadcasting was fostered, with a profound economic effect upon the nation. Former opposition to the Navy's move soon turned into approbation and its foresight was applauded.

The Navy also contributed to the U. S. efforts to obtain international agreement to the allocation of frequencies.

At the International Radio Convention of 1927, the Navy offered what appeared to be the only plan which existed on paper for "frequency allocation."

Motivated as always by its intent to go anywhere on the seas and maintain communications with the home base and other Navy ships wherever located, the Navy also sought orderliness in international communications which only a practical frequency allocation plan could effect.

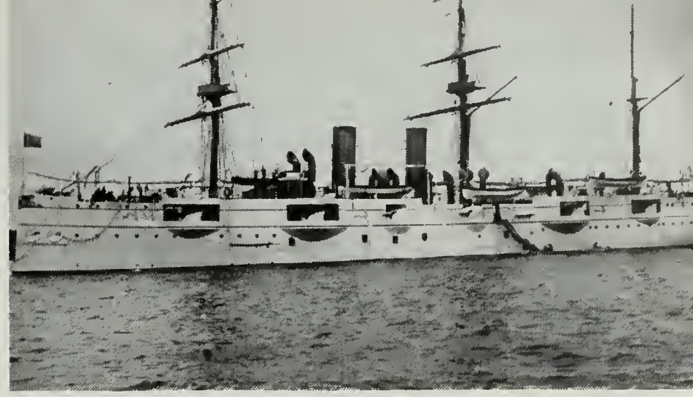
It had both the radio experience and the frequency plan, which accommodated every known radio service, including amateur radio. *Then, as now, Navy considered amateur radio operators an invaluable technical and development reservoir in the national interest.* The Navy's allocation concept still forms the basis of frequency assignments throughout the world. World radio was spurred by this historic landmark in communications.

The Navy's aid in the formation of our present age of radio is so great that space limitations prevent enumeration. For instance, it had an important part in the first "radio propagation" studies ever made.

It was a Navy enlisted man (whose name is unfortunately lost to history), who first pointed to the influence of "sunspots" on radio communications. At that time mankind did not know that radio communications, and particularly long-range communications, are vitally affected by the sunspot cycle; today this is common knowledge. At the time, however, it was another foundation stone.

Today it means little or nothing, perhaps, that our communications facilities which were once called "wireless stations" are now "radio stations." The Navy was the first to adopt the novel term by designating NAA a Navy "radio station." The Navy term has since been adopted by the entire communications industry.

When President Theodore Roosevelt sent the Great White Fleet around the world on an international goodwill mission, Dr. Lee de Forest, the "father of radio broadcasting," was on board the battleship *Connecticut,* flagship of the Fleet. Using his new vacuum tubes, Dr. de Forest supervised one of the first successful tests of the wireless telephone between *Connecticut* and the Naval Radio Station at Point Loma, Calif., and what we know as "radio broadcasting," or the transmission of voice by radio, was in part born.



STRANGE SOUNDS—In 1888 an electric current sent via *USS Newark's* coils, received at a distance on Navy tug.

Less than a decade later, the world's first remotely controlled radio station was installed and operated by the United States Navy in Washington, D. C.; and one of the very earliest automobile radios was developed by personnel of the Naval Research Laboratory.

The Navy was also the first to broadcast the voice of a President of the United States, that of Warren G. Harding, during the dedication of the Lincoln Memorial, and at this time, the Navy also installed the first radio receiving set in the White House.

The Navy was one of the earliest users of the very low frequencies, which are of the same as high frequency sound waves. Our newest very low frequency transmitter is at Jim Creek, in the State of Washington, and is the most powerful radio station of its kind in the world.

In the early 1920s, personnel of the Navy were already investigating and testing facsimile equipment, and in 1923, recognizable pictures of President Harding were transmitted by the Navy from Washington, D. C., to Philadelphia, Pa. Twenty-two years later, photographs of the Japanese surrender ceremonies aboard USS *Missouri* (BB 63) were transmitted by the Navy more than 5000 miles to the United States and the nation's press. Today, weather maps and other valuable pictorial data are transmitted thousands of miles for the benefit of the Navy and public alike.

Great as the Navy's role has been in this important field, vital contributions have been made by our sister services, by industry, and by many individuals. A true history of the development of radio will include all.

The Navy does, however, hope to participate in the continued development of radio in the present era as it has in the past, and welcomes the wide participation of all interests now equally active in this field.

Ships That Played An Important Role In Developing Navy Radio

USS *Massachusetts*

USS *Nebraska*

USS *Virginia*

TAFFRAIL TALK

There was great excitement at All Hands recently. The list for Officer Candidate School had just come out. And there on the list were two familiar names—Rodolfo C. Garcia, JOC, and Bernard R. Baugh, JO1. Both staff members. So we've lost two of our staffers—Rudy and Barney.

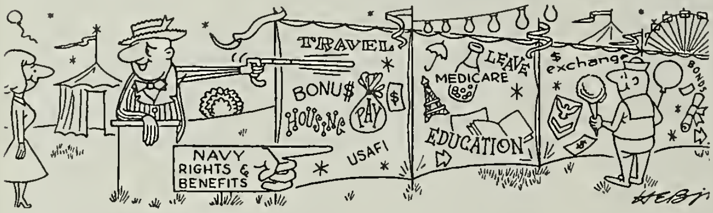
After the rigorous training at Newport OCS, and some further specialized schools, Rudy and Barney are slated to be assigned to sea. We hope their new commanding officers don't hear about it, but we're going to give some "spare time" assignments to those two.

New staffers will be William Prosser, JO1, from ComFive and Tom Wholey, JOC, from DesLant. We're waiting for them now.

We are also saying goodbye to Joseph Eagen, PN3, one of the unsung heroes of our research department, and our "printer" for Navy *Chaplain's Bulletin*, researchist for *The Naval Reservist*, assistant layout man for All Hands, and general factotum. To replace Joe, we have Bill Miller, SA. That is a name familiar to All Hands readers, but it is not the same Bill Miller. Our former staffer, Bill Miller, JOC, is the winner of a gold medal from the *Naval Institute Proceedings*. Our new Bill Miller, SA, therefore, has quite a task before him: Live up to the reputation of JOC Miller, and fill the shoes of Joe Eagen.

★ ★ ★

When the office copies of a new issue of all hands arrive, we all lean back in our chairs to check our handiwork. It is at this moment when the obvious typographical errors, misplaced cuts and lost captions appear. We've been thumbing through our 80-page May Rights and Benefits issue and, as of this moment, we have a message for you. Don't tell us about the WO bars on page 41. We know about it — now.



★ ★ ★

Not long ago we had occasion in this column to comment upon the sleeveless errands with which some new crew members found themselves engaged. Now we recall another—a specialty of the Supply Department.

A requisition is filled out, replete with multitudes of carbons, for, let us say; one (1) length of shore line, 50 feet long, Stock No. NA-47543. The eager beaver, happy to please, dashes briskly to half-a-dozen or more stock rooms. At each, he is made to wait as long as possible, the chit is stamped and initialed, the lad is gently chided for being so stupid as to apply at the wrong desk and is referred to the "proper" one. The game lasts as long as the victim's legs and naivete endure.

The All Hands Staff

The United States Navy

Guardian of our Country

The United States Navy is responsible for maintaining control of the sea and is a ready force on watch at home and overseas, capable of strong action to preserve the peace or of instant offensive action to win in war.

It is upon the maintenance of this control that our country's glorious future depends. The United States Navy exists to make it so.

We Serve with Honor

Tradition, valor and victory are the Navy's heritage from the past. To these may be added dedication, discipline and vigilance as the watchwords of the present and future. At home or on distant stations, we serve with pride, confident in the respect of our country, our shipmates, and our families. Our responsibilities sober us; our adversities strengthen us.

Service to God and Country is our special privilege. We serve with honor.

The Future of the Navy

The Navy will always employ new weapons, new techniques and greater power to protect and defend the United States on the sea, under the sea, and in the air.

Now and in the future, control of the sea gives the United States her greatest advantage for the maintenance of peace and for victory in war. Mobility, surprise, dispersal and offensive power are the keynotes of the new Navy. The roots of the Navy lie in a strong belief in the future, in continued dedication to our tasks, and in reflection on our heritage from the past. Never have our opportunities and our responsibilities been greater.

ALL HANDS the Bureau of Naval Personnel Information Bulletin, with approval of the Bureau of the Budget on 23 June 1955, is published monthly by the Bureau of Naval Personnel for the information and interest of the naval service as a whole. Opinions expressed are not necessarily those of the Navy Department. Reference to regulations, orders and directions is for information and does not by publication herein constitute authority for action. All original material may be reprinted as desired if proper credit is given ALL HANDS. Original articles of general interest may be forwarded to the Editor.

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The Bureau should be kept informed of changes in the number of copies required.

The Bureau should also be advised if the full number of copies is not received regularly.

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• AT RIGHT: HOIST AWAY—Winch operator mans control of hoist used to raise small boats on board Attack Transport USS *Cavalier* (APA 37) while his ship takes on supplies in the harbor at Long Beach, Calif.

TOOLS OF A TRADE

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ALL HANDS

THE BUREAU OF NAVAL PERSONNEL INFORMATION BULLETIN

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JULY 1957

ALL HANDS

THE BUREAU OF NAVAL PERSONNEL INFORMATION BULLETIN

JULY 1957 Nav-Pers-O NUMBER 486

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The Chief of Naval Personnel

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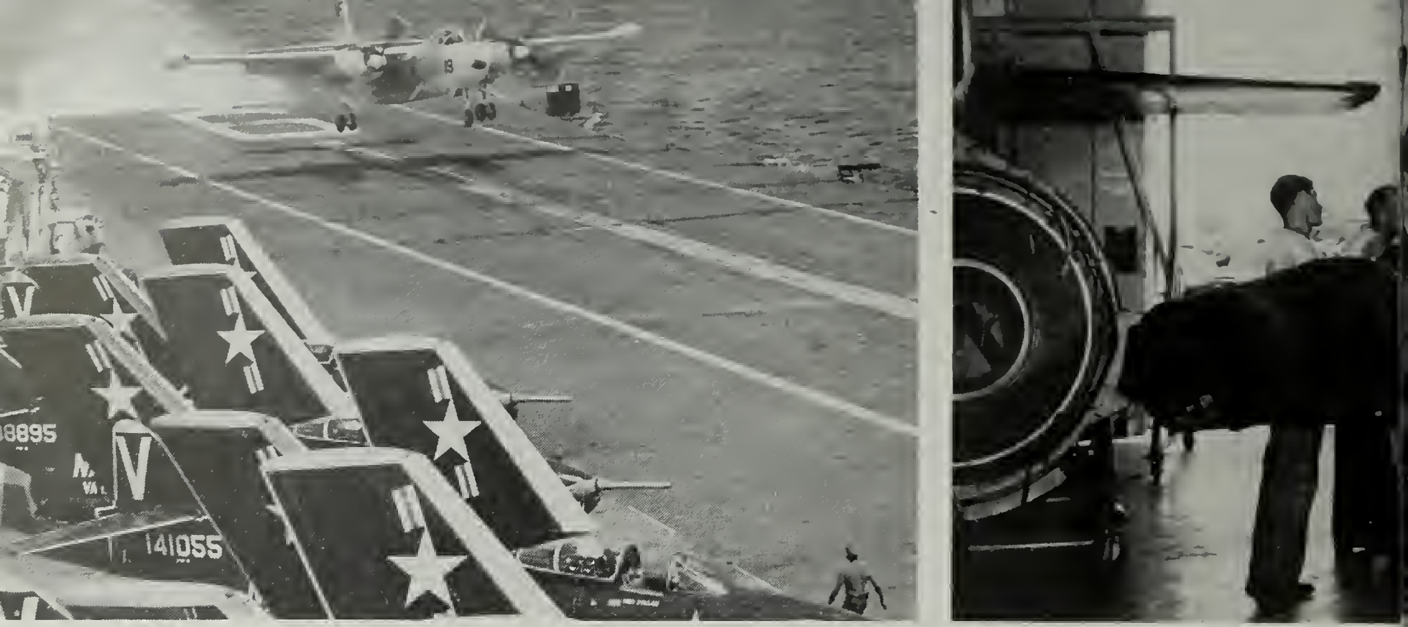
David Rosenberg, **Art**
Elsa Arthur, **Research**
French Crawford Smith, **Reserve**
Don Addor, **Layout**

- **FRONT COVER: WELL STACKED DDE—Crew member of USS *Walker* (DDE 517) strikes the victor's pose after painting 'E' for engineering efficiency on ship's stack while the skipper, CDR C. H. Smith, USN, smiles approvingly.**

- **AT LEFT: HUT, HOOP, HE, HO—Recruit drum and bugle corps of San Diego Recruit Training Command steps smartly down the avenue during a civic celebration.**

- **CREDITS: All photographs published in ALL HANDS are official Department of Defense Photos unless otherwise designated.**



SKILLED MEN ON DECK mean more power in the air. *Left:* AJ-2 lands on carrier. *Right:* ADs study F9F engine.

NATTC—It Keeps the Navy Up

One of the most potent weapons of the Navy today is its naval air force, extending, as it does, over the seven seas and most of the continents. It is manned by some of the best airmen in the world who fly the best planes available.

Neither would be worth two hoots and a holler if these planes were not in the peak of working order. It takes only one man to fly a plane, but it requires the combined talents of 10 to 20 skilled technicians to keep that aircraft in condition to leave the ship, accomplish its mission and return.

The success of the Navy's air missions depends on three essentials—airplanes, pilots, and maintenance men. Supplying these maintenance technicians for the Navy's air fleets around the world is the job of the Naval Air Technical Training Command.

Headquarters for this command, and also the site of many of the schools, is the Naval Air Technical Training Command, Memphis, Tenn. In all, the NATTCommand consists of 43 schools, from the basic Airman Preparatory School to the highly technical Aviation Electronics Technician, Aviation Fire Control Technician and Aviation Guided Missileman schools.

The foundation for all technical training for the Navy's enlisted airmen is set in the Airman Preparatory School. In the AN "P" School, the Navy insures that Airman Doe does not get channeled into the job better suited for Airman Smith, and vice versa. And the process of helping each man choose his career field isn't hurried. Final choice is not required until the end of 200 hours' instruction.

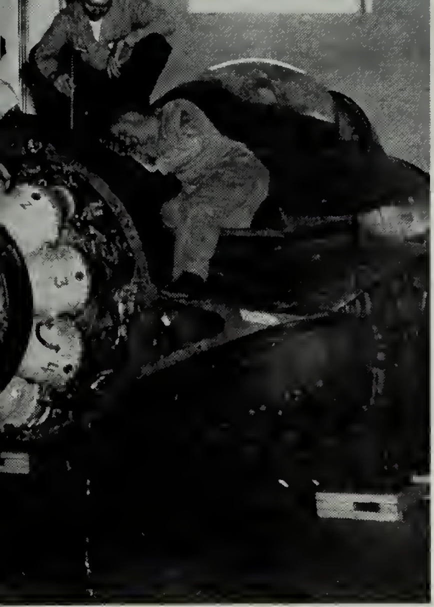
The Airman Prep school serves as the groundwork for his future in naval aviation. Here he's exposed to the fundamentals of aviation seamanship and becomes acquainted with the basic skills of every aviation rating. He also learns the principles of survival equipment, passes specified swimming tests and determines the shape of his future as he goes through a series of screening and rate selection tests.

AIRMAN SCHOOL at Norman includes course in fundamentals of electronics. Trainees, studying series resistor circuit, use wiring boards to work experiment.

In all, the embryo airman is given the basic knowledge which prepares him for the next level of training—Class A School.

Upon entering one of the 14 Class A Schools run by the Naval Air Technical Training Command, the student begins to specialize as he learns the fundamental principles of his particular rating.

Today, this Class A level of training has been further specialized with the activation and training of men in Selective Emergency Service Ratings. The SESR program also includes a number of general service



NATTC TEACHES TECHNICIANS tricks of the trade. *Right:* Shopwork in mechanical fundamentals at Norman, Okla.

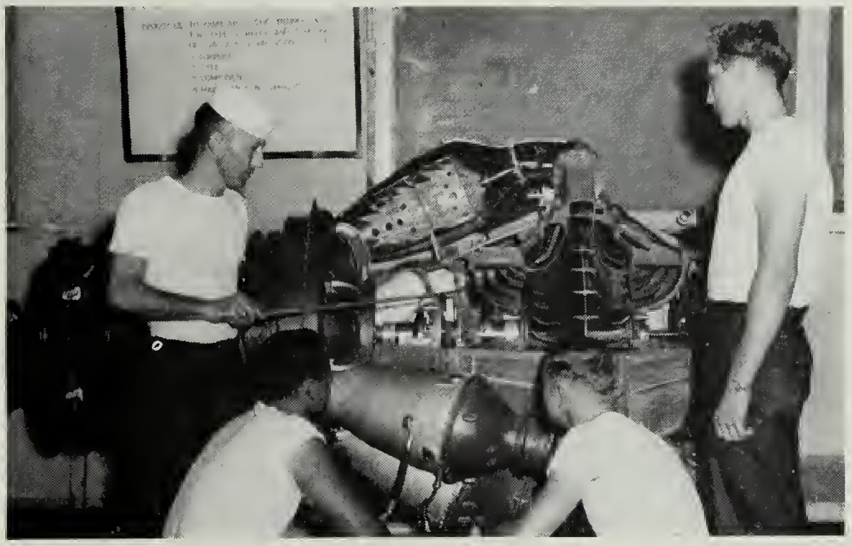
n the Air

ratings. Besides reducing the basic training time in school, specialization intensifies the knowledge and capabilities of the school graduate within his specific field, instead of giving him a broad, but thin, understanding of all the facets of his rating.

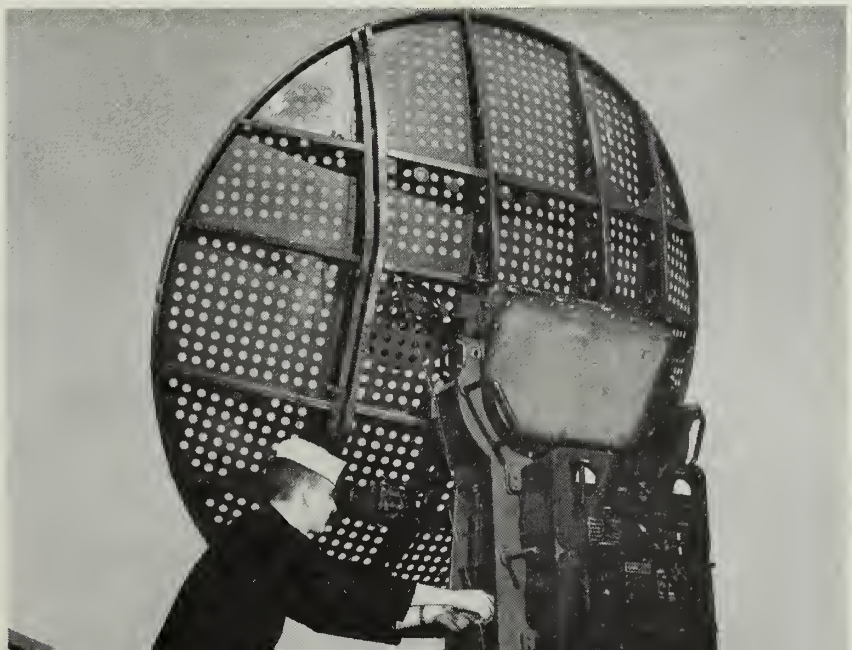
All of the Class A Schools in the NATTCommand, except for Aviation Storekeeper, Aviation Guided Missileman and Aerographer's Mate schools eventually will be divided into two or three courses. The Air Controlman and Aviation Electronics Technician schools are divided into three courses. All other Class A Schools are divided into two courses. (The list of Selective Emergency Service Ratings which have been activated may be found in BuPers Inst. 1223.1.)

Under the SESR Program, all of these schools use training equipment and accessories similar to the ones now in use by the Fleet. The training under SESR is not a "broad brush" treatment, but rather, limited and intensive so that the students may be available for work in a much shorter time after reporting to their duty stations.

As the Airman advances up the promotion ladder to petty officer second or third class, he again becomes eligible for another class of school conducted by the Naval Air Technical Training Command. These



IT TAKES ALL KINDS of technicians to keep Navy in the air. *Above:* ADs get inside story on jet engine. *Below:* AG student sets tracking system of Rawin set.



WEATHER WATCHERS — *Left:* AN in Class A school for AGs. *Right:* AGs in Class B school study in special plane.

are the Class B Schools, which, in effect, are post-graduate courses to train junior petty officers for advancement to PO1 and CPO.

Then there are Class C schools and courses which train personnel in a particular technique or on a specific phase of a rating. Typical of some of these schools and courses are Ice Observer Course, Camera Repair School, Target Drone School and Ground Controlled Approach Courses.

The Naval Air Technical Training Command has been turning out these masters of maintenance for the Air Navy for almost 15 years. The organization came into being on 11 Sep 1942 with headquarters in Chicago, Ill. Like many another Navy project it had its inception at the outbreak of World War II.

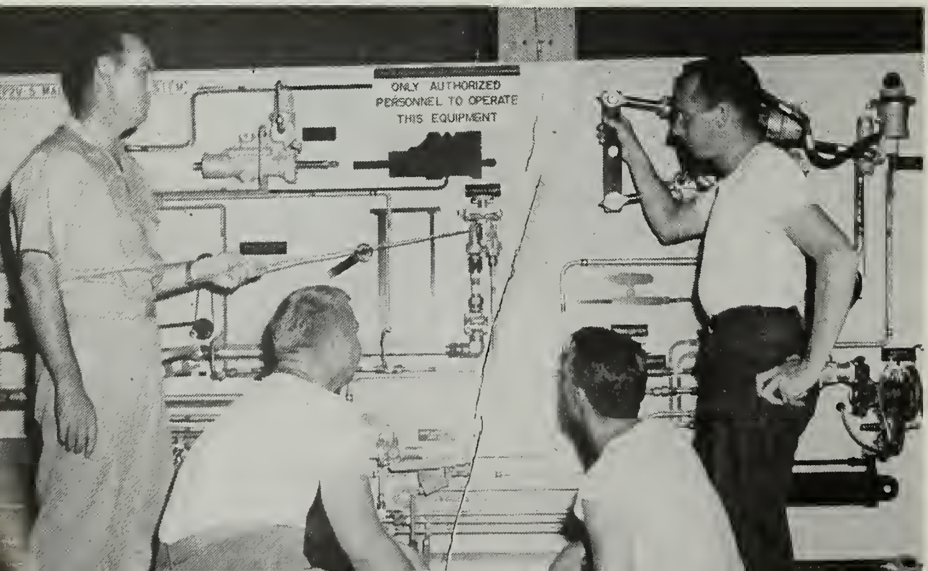
Before that time, naval aviation maintained service schools which taught such subjects as engine upkeep and repair, ordnance equipment, sheet metal work and similar aviation specialties. These schools were small, however, and proved incapable of coping with the stepped-up naval air program.

During World War II the NATTCommand produced more than 360,000 skilled technicians in some 21 various aviation ratings. The Navy's 14-1 shoot-down record in the Pacific might be attributed in part to the excellent work by the graduates of NATTCommand.

The first "president" of the Navy's "Air University" was Rear Admiral Albert C. Read, USN, who early acquired a thorough respect for maintenance as a result of his world's first transoceanic air crossing in the famous NC-4.

After the war, the NATTC headquarters was moved to NAS Pensacola, Fla., then finally to its present quarters at Memphis. In reality, the Center is 18 miles north of Memphis, in Millington, Tenn. Other technician schools under NATTCommand are located at Pensacola and Jacksonville, Fla., Glynco, Ga.; Olathe, Kansas; Lakehurst, N. J.; Norman, Okla.; Glenview, Ill.; Philadelphia, Pa.; and El Centro, Calif.

HERE'S HOW — Aviation Structural Mechanics in Class B school at Memphis, learn from instructor how pump works in hydraulics system of a P2V-5 *Neptune*.


ONLY AUTHORIZED PERSONNEL TO OPERATE THIS EQUIPMENT

All formal technical aviation training in the Regular Navy, except the actual instruction of student pilots, comes under the command of the Chief of Naval Air Technical Training. Last year, this vast training outfit graduated more than 21,000 men from its schools.

As these graduates spread out to their various duty stations in aircraft carriers, air stations, and squadrons, they step into jobs which require nothing less than the best work they can produce. When the pilot signs his plane captain's clearance sheet before take-off, he is saying that the maintenance men have done their jobs to his satisfaction.

The skin, structure and hydraulic systems of the plane have been checked and repaired by the AMs. The engines, (or turbines), carburetors and propellers have been put in top working order by the ADs. AEs have tested, checked and repaired the various electrical systems and AEIs have insured operation of the other electrically controlled gear and instruments.

Fighting weapons and ammunition that bite hard at the enemy have been prepared, repaired and loaded onto the planes by the AOs, who also have insured the split-second operation of bomb release mechanisms. If the aircraft carries guided missiles, the GFs have insured their perfect operation.

The plane's fire control systems have been checked and adjusted by

HIGHER LEARNING — *Left:* PRs hit the silk in school at Lakehurst, N. J. *Right:* AM practices welding at Memphis.

the AQs. Airborne electronic devices—radio and radar—are serviced and operated by the ATs. Parachutes worn by pilots and crew have been packed and tested by PRs. These men also have checked the survival gear aboard the plane.

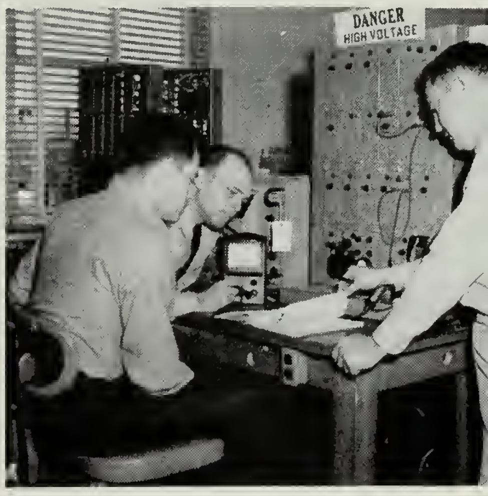
Pilots know wind and cloud conditions before they leave the deck of the carrier because AGs have collected and prepared aerological data. Targets have been photographed by PHs and the photos have been interpreted by Photo Interpretation Officers. The second strike of planes to leave the deck will carry other PHs, who will photograph results of the mission.

Long before the pilot even stepped into the aircraft, he made a number of familiarization flights in a simulated trainer, operated by a TD.

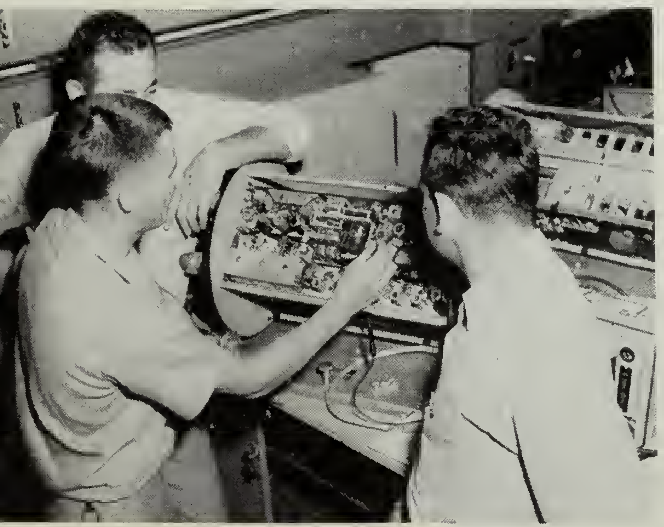
As the pilot returns from his actual flight, he is guided to the carrier deck either by an LSO aided by an AC or by an AC operating the Carrier Controlled Approach equipment.

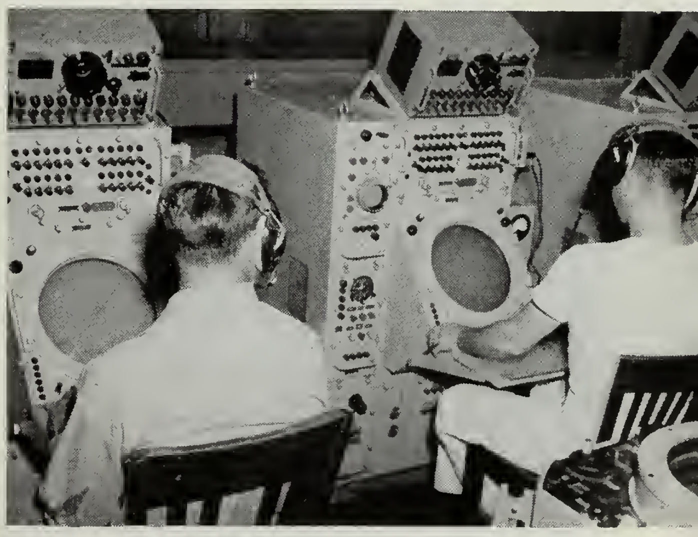
Once spotted by ABs, the plane is swarmed over by maintenance men putting the aircraft into shape for the next operation. Tools, spare parts, and other needed accessories are issued to the technicians by the AKs.

All in all, it's a team operation, and only excellent training and constant practice can get the team in top efficiency. The practice part is taken care of in the Fleet. And the maintenance men have had excellent training, thanks to the work by the Naval Air Technical Training Command. — Rudy C. Garcia, JOC, USN



RADAR AND RADIO are taught to ATs (*above* and *lower left*) at Memphis. GCA school (*below*) is in Kansas.





READY FOR ACTION — Submarine rescue ship USS *Greenlet* (ASR 10) is one of ten sub rescuers in Fleet.

Submarine Rescue Teams

MEN DESCEND TO THE ocean deeps for a variety of reasons. Some look for sunken treasure. Others salvage valuable cargo. Still others—scientists—study the bottom's flora and fauna. But the sailors of Uncle Sam's submarine rescue ships, designated ASRs, lower themselves to the ocean floor to recover that most precious treasure of all—human life.

The most spectacular submarine rescue mission was accomplished by USS *Falcon* (ASR-2). That was in 1939, when 33 crewmen of the stricken USS *Squalus* (SS 192) were hoisted to the surface from a depth of 240 feet. To insure that feats like the *Squalus* rescue can be repeated if necessary, the Navy maintains 10 ASRs, including USS *Greenlet* (ASR 10), pictured here. Each is manned with a crew of about 80 that includes at least a dozen expert deep-sea divers.

The ASR is a small ship, only 251 feet in length, but easily distinguishable by her large pontoon buoys, heavy booms and intricate rigging gear. She carries every type of salvage equipment required for the rescue of a damaged submarine, chief item of which is an improved version of the "McCann diving bell," the device that brought *Squalus* men to safety through 40 fathoms of icy water. Much of the ASR's time is spent performing routine tasks like target-towing, torpedo-retrieving, mine recovery and small salvage operations, but her crew trains continually to become expert at a task that they hope will never have to be performed—getting men out of a sunken submarine alive.

Periodically a submarine is appointed to act as "victim." She sets out from harbor, making the periodic contact reports an underwater warship is required to file. Then, without any warning, she stops sending them and glides to the bottom, there to wait until an ASR comes out to "save" her crew. Her actual position is known only by the officer scheduling the exercise.

As soon as these regular contact reports stop coming in, the submarine is presumed to be missing and all Sea-Air Rescue units are alerted. These units are composed of aircraft and surface craft that assist in searching for the submarine and render logistic support to the ASR while conducting rescue operations.

The ASR heads out to sea carrying her 11-ton steel cylindrical diving bell. The bell stands over 10 feet high, is seven feet in diameter, and has a two-man crew. In the charthouse the navigator and his assistants check the position of the submarine's last contact report, and use this as the center of a search circle. The circle's radius is the distance the submarine could have traveled since that contact report, and its area will be the search area.

The ASR then races to the circle's center and begins a rectangular search, each leg becoming increasingly longer until the ship's track looks like a Chinese maze. This insures that every square yard of the bottom is checked by the rescue ship's sonic equipment. Underwater sound devices are employed until a particular "ping" comes over the sonarman's phones.

The submarine has been found. It remains now to place the ASR in position over the "sunken" submarine. Using underwater communication devices, she asks the sub to send up smoke bombs, which she does. Then she requests that the undersea craft release a special buoy

AWAY WORK BOAT—Personnel launch is lowered to assist in locating stranded sub. Boat may be used to mark sub's position during rescue operation.

fixed to its deck. When this buoy surfaces, its cable is cut and attached to the underside of the diving bell to give direct connection with the sub. As a triple check, a diver may be sent down to locate the sub by actual touch. This is possible, however, only when the "sunken" ship's depth is not more than 500 feet.

Four heavily anchored spuds (stilt-like timbers) are placed in position by the ASR to keep her held squarely above the "sunken" submarine, and the massive bell is hoisted out into the water, where positive buoyancy keeps it bobbing gently beside its mother ship. To it are attached electrical, air and telephone lines, as well as heavy cable from its top to the ship's boom. While the lower downhaul cable is the bell's contact with the submarine, the upper backhaul cable helps the ASR to control it. Two operators then climb into the giant bulb, and start down to the sub.

The McCann diving bell has two chambers, upper and lower, separated by an air-and-water-tight hatch. The upper compartment is enclosed; its occupants depend on the ASR's compressors for air, while the lower compartment, called a "skirt," is open to the sea. In the lower is an air-powered winch, and along its sides are ballast tanks for taking in and expelling sea water as necessary. Around the edge of the bell's bottom is a thick rubber gasket.

By adjusting valves so that their ballast tanks take in sea water, the bell's operators give their teardrop-shaped "elevator" negative buoyancy. Then they use an air motor to spin the winch, reeling in the lower cable and actually towing them down to the submarine's deck.

When their bell rests directly over the rescue fitting they flood ballast tanks to increase its weight and hold it in place. Then, using air pressure, they blow all water from its skirt and bleed excess air from the skirt into the bell. Thus gravity, plus undersea pressure, work together to keep the diving bell fixed in the proper spot.

Now it's time for human hands to complete the rescue. One of the bell's operators opens the hatch to the skirt and drops through. Using a wrench he tightens down on four special fittings at the rescue hatch to clamp the bell mechanically on the submarine. Then the bell, for all practical purposes, becomes an additional compartment or room of the submarine itself.

DEEP DROP—Diver goes over side of ASR, about to submerge to search for 'disabled' sub. Continuous training keeps efficiency ratings high.

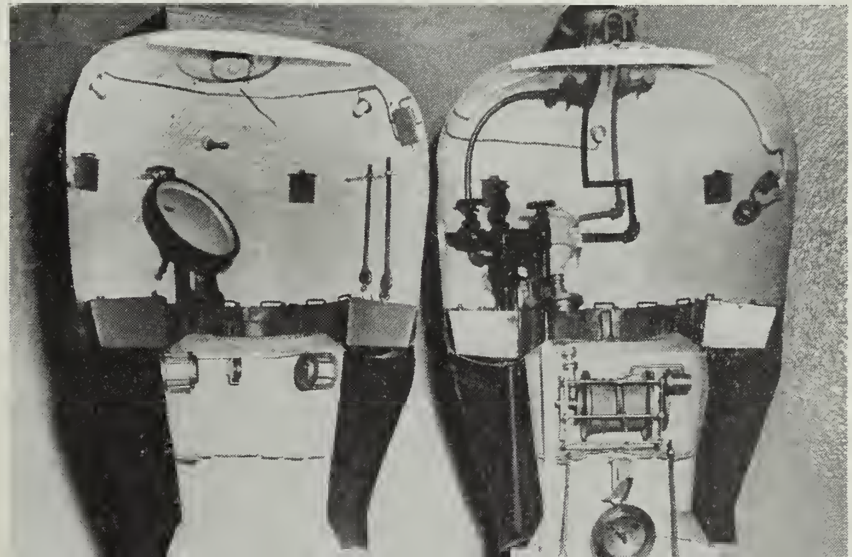
Should it be desired at this point actually to remove men from the "sunken" submarine, the bell's operators simply reach down, open the submarine hatch, and say to the men clustered inside, "Going up?" In a real rescue the bell can carry up to seven passengers at a time.

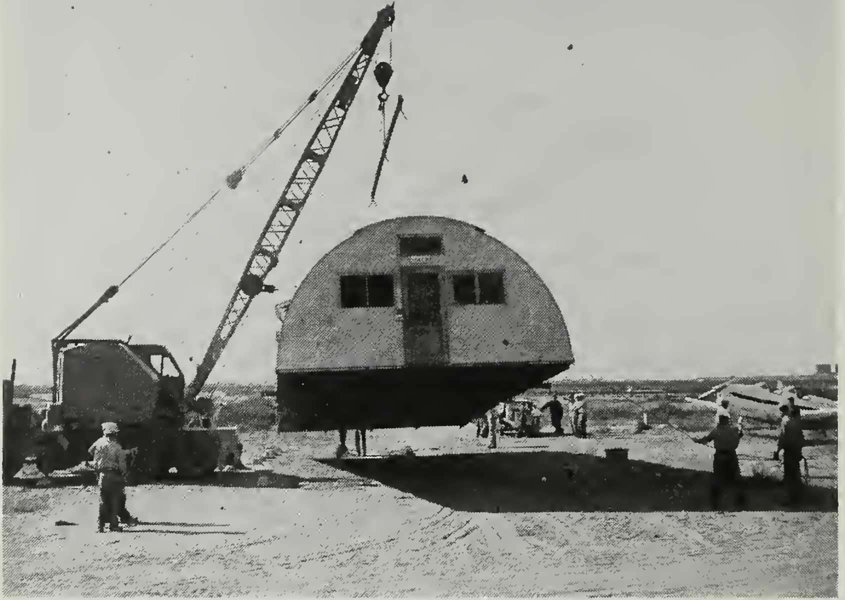
Ascent of the bell is a reversal of its descent. The submarine's hatch is closed, clamps removed, and the bell's skirt flooded with water to break suction. Then the ballast tanks are blown partially free of water to reduce negative buoyancy and the ASR takes up the slack in the overhead cable and starts to haul it in. The bell starts for the surface, where "survivors" climb out through its top hatch and onto the rescue ship's deck, where ASR crewmen get them warm clothes and hot food.

ASR sailors, though part of the submarine fleet, do not enjoy in many eyes the glamor of men who man the underseas ships. They are, however, in a real sense a "man's man." When a submariner goes to sea, he does so in the knowledge that while he is prowling the murky depths his brothers in the submarine rescue ships are on the surface, working and training so they can help him should affairs go afoul.

—Hanley Norment, JO2, USN;
William Hinds, JOSN, USN.

SLICED BELL—Upper compartment houses two operators, maximum of seven passengers. Lower half has suction gasket, attached sub hatch cable.





HUT AHOY!—CB Reserves of San Diego got plenty of on-the-job training when they volunteered to move and set up new building for Civil Air Patrol.

Ambassador

WHEN YOU CAN carry out a training exercise and at the same time provide a service for someone else, that's a good deal—and Seabee Reservists know a good deal when they see one. Year after year, reports from all over the country tell of community projects which were turned into Group Active Duty Training. Seabees have pitched in during times of disaster, helped restore Boy and Girl Scout camps, rehabilitated run-down recreation areas, and the like, all the while improving their technical skills.

It's not always possible to provide training facilities for all Seabee ratings at a Training Center and thus it's often difficult for some ratings to get checked out in their practical factors.

For an example of a project which satisfied both needs, take the one in which CB Division 11-1, San Diego, Calif., took part.

A Civil Air Patrol squadron needed additional building facilities for their installation at the National City Airport and the Navy had surplus Quonset huts which would serve the purpose. On a Group Active Duty Training project over a weekend, the Seabees provided the skill and, with equipment borrowed from NAS Miramar and NAS North Island, carried out the program.

More was involved than a mere physical move of Quonset huts from NAS Miramar to National City Airport, however. The exercise provided opportunity for officers and chiefs to handle the administrative details in conjunction with local and state

Vith Hammers and Saws

authorities, to secure the necessary permits and to control public traffic. Preparation of the huts for moving, transporting them and finally setting them on their new foundations, enabled CDs, BULs, SVs and SWs—to mention just a few—to be checked out in their practical factors.

Now, let's take a quick trip across the country and look at some other projects tackled by Seabee "goodwill ambassadors."

Reservists of CB Division 11-14, Las Vegas, Nev., heard about Camp Bonanza, a Boy Scout camp, in need of repair. A rugged winter at the camp's 8000-ft.-high location in the mountains made a variety of repairs necessary. Because of the 50-mile distance from Las Vegas to the camp site, some of the Division members left Friday evening and spent the night in sleeping bags in the camp's dining hall. Others followed early the next morning. The Reservists installed a new 10,000-gallon water-tank, overhauled machinery for the camp's deep freeze, and rebuilt the front steps of the main building. As a result of the Reservists' efforts, hundreds of youngsters may enjoy a safer, happier summer.

In the Los Angeles area, NRCB Division 1-22 Reservists have been aiding the local Scout Council for many years. The over-all project, to develop a 12,000-acre camp site, was started in 1950 when men of the Hawthorne, Calif., CB Reserve unit volunteered their weekends, without pay. Work was interrupted during the Korean conflict and a fire in 1955 caused an additional setback. This spring, the CBs got back to work, cutting and widening a roadway which will connect the old camp site with two new sites. When the road is finished, other units will come in to work on sanitation, rehabilitation of firebreaks and laying wire for a communications system.

A little farther east but still in California, NRCB Division 11-10 of San Bernardino, turned to on a face-lifting job of a camp ground near Lake Arrowhead. In addition to digging foundations and pouring concrete for 16 fireplaces, they built picnic tables and surveyed and staked for roads and parking.

When time was the important factor in Sacramento, Calif., members of NRCB Division 12-6 were on the spot, ready to put a "finger in the dike." As host for a cross-country track meet, Grant Union High School had the responsibility of seeing to it that a regulation course be laid out, but time was running out. The Seabees accepted the challenge and made the survey in time to permit the meet to take place as scheduled. For performing this public service, the officers and men who took part received a letter of thanks from the coach and a "well done" from the district commandant.

Here's another example, which—although not a community project—shows the readiness and cooperative spirit for which the Seabees have become noted. Up in Eugene, Oreg., a Navy patrol plane made an emergency landing on a federal reservoir. In an attempted take-off—after necessary repairs and refueling—the plane struck a partially submerged object, rending the hull in several places. By lowering the water level, the plane was beached. However, a heavy snowfall threatened to submerge the plane, which would have resulted in a loss of more than one million dollars.

The call went out to NRCB Division 13-8 in nearby Eugene. Although the emergency arose over a weekend, 16 men volunteered to tackle the job of excavating under the plane and repairing the damage. Because of the possible hazards involved in the job, the division's commanding officer asked that the volunteers be placed on AcDuTra. The men worked more than four days in below-zero weather—accumulating more than 300 man-hours. After excavating under the plane—a job made more difficult by the lake ooze—it was necessary to

SKILLS that were once wasted in building practice houses and projects now helping out Navy's neighbors.

GOOD DEED—Navy bulldozer operator of Reserve CB unit gains valuable experience in road construction while cutting the way into Scout camp.

NAVY'S MR. FIXIT—Hammer-wielding sailors square away a run-down scout camp, keeping their Navy skill in shipshape condition during weekend drills.

man a hand-pump around the clock, build pallets, cradles, bases and frames for the repair crew. The plane, of course, was rescued from its muddy plight.

On the east coast, men of NRCB Division 1-2, Portsmouth, N. H., came to the aid of the Girl Scouts. A new central building was needed at the Scout camp and the Seabee Reservists decided to make this their summer project. Instead of meeting at the Training Center in Portsmouth for their regularly scheduled Tuesday-night drill, some 600 members gathered at the camp site to work on the building. Interest was so great that some Reservists made the trip from distant points in New Hampshire, Maine and Massachusetts. The undertaking was well organized, complete with hospital corpsmen and a walkie-talkie communications link with the Training Center at the Portsmouth Naval Base.

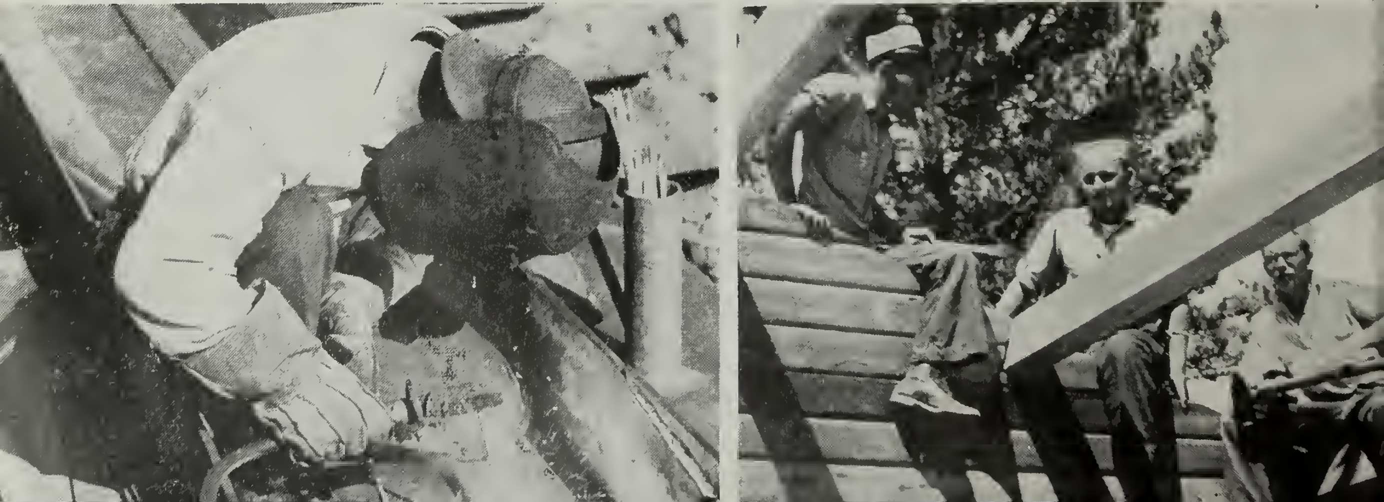
Down in Boston, Public Relations Company 1-1 heard about the Kiwanis Club's "Camp Allen," in Bedford, N. H., a camp for blind girls. Once destroyed by fire, it had been rebuilt; but dead timber and other debris strewn on the grounds presented a constant fire hazard to the new buildings and the girls. NCRB Division 1-3, Manchester, N. H., got the word from Boston and volunteered to rectify the situation. "Operation Blind Girl," took about six months to complete but, when finished, the hazard was removed and the grounds made shipshape. Both Public Relations Company 1-1 and CB Division 1-3 received "Distinguished Service" trophies as a tribute to their "good neighbor policy."

In New London, Conn., NRCB Division 3-23 was recently awarded a commendation by the local Girl Scout Council. Early in December, the Seabees decided that a road the girls needed at their summer camp would be a worthwhile weekend project. Building a mile-long road is quite a task, but the New London Reservists tossed it off with typical Seabee "can do" spirit. They got right down to work clearing underbrush and trees, hauling tons of gravel, grading the roadbed and building a culvert to drain off the swamp land to make it smooth sailing for the Girl Scouts.

Many of these undertakings would have been next to impossible for the local organizations themselves to accomplish, because of lack of funds, manpower, or equipment. In each of these incidents, the Seabee Reservists had what was needed, when it was needed, to make the difference between something nebulous and something concrete, an idea and a reality.

By taking part in these community projects, the Reservists have increased their varied abilities and their mobilization potential. And they've built up an important byproduct—invaluable good will toward Seabees in particular and the Navy in general. —Robert S. Marx

MANY DIFFERENT ratings are going to work to help their community while helping themselves and the Navy.



EFFICIENCY is high as maneuvering Seabees fire rocket launchers and *(below)* automatic light machineguns.

Construction Men Train for Combat

In order that they may carry on in the footsteps of their famed predecessors of WW II, Seabee Reservists of the Eighth, Ninth, and 11th through 14th Naval Districts receive two weeks of "rugged" combat training at the Marine Corps Recruit Depot in San Diego, Calif.

The "old men," as they are affectionately known, won the respect of Marines and other fighting units by proving in training and in combat that they were as handy with a rifle or machine gun as they were with a bulldozer or transit.

After the first morning of introductory lectures, construction men swing right into the actual training with close order drill and instruction in the M-1 rifle, its function and breakdown. By Thursday of the first week, the Seabees are ready for the night defensive problem. As part of the maneuver, recon and combat patrols are sent out, while Marine personnel harass and snipe at the defensive unit throughout the night. A critique is held early the next morning followed by preparations for the offensive problem which is conducted at night. Again the exercise is reviewed and criticized after which the "warriors" move back to camp for inspection, food and weekend liberty.

Their second week is spent on the range. This phase of training consists of firing the rifle, both M-1 and Browning automatic, pistol and hand grenades.

It is followed by demonstrations in the flame thrower, rocket launcher, machine gun and other types of weapons. After continued rifle position exercises and firing practice, the Reservists shoot for record on their last day. The highest score achieved is entered in their administrative records.

At the end of their training there is a final inspection, and the Reservists leave for home, which may be anywhere from Iowa to Hawaii.

—Jack Harmon, TSgt, USMC.

TECHNIQUES OF GRENADE launching are taught to class of active duty Seabees on a deserted rocky hill.

So You're Going to the Naval

Don't look now, but the man working next to you may be an Academy graduate in a few years. He will have received one of the finest educations available in this country today, at no cost to him. When he receives his commission as ensign, USN, or second lieutenant, USMC, he will also be awarded a Bachelor of Science degree. He will have to work hard, but the rewards are worth the labor. From that time on, he'll have the prestige and stature of an Academy man. He'll also have a top-flight academic training behind him.

Pretty lucky, you say. Must be a genius, or have plenty of influence, to get in on a deal like that. Not so. You can have the same deal yourself if you are qualified, willing to work hard—really hard—*and take the trouble to apply.*

Many enlisted men in the Navy today are ignoring the possibility of an officer's career simply because they believe the odds against entering the Naval Academy are too great. Admittedly, the standards are high. Yet, each year, more than a thousand men in the service or in civilian life are selected for appointment. You're just as good as the next man. Some 160 enlisted men on active duty in the Regular Navy and Marine Corps, plus an equal number of Reservists may be appointed by the Secretary of the Navy.

The Academy is unique. Essentially an engineering college, at the same time the Academy is based upon a broad, fundamental education—one which supplies the foundation for higher learning on the postgraduate level. It is the only institution in this country devoted to the sole purpose of providing career officers for the naval service.

In the words of Admiral Holloway, the "U. S. Naval Academy educates young men to be admirals—not just junior officers." At the same time, the Academy provides a background and heritage of the service that goes hand in hand with an engineering curriculum. These, together with continual emphasis on the humanities, lead to a balanced course of studies necessary for a well-rounded career officer.

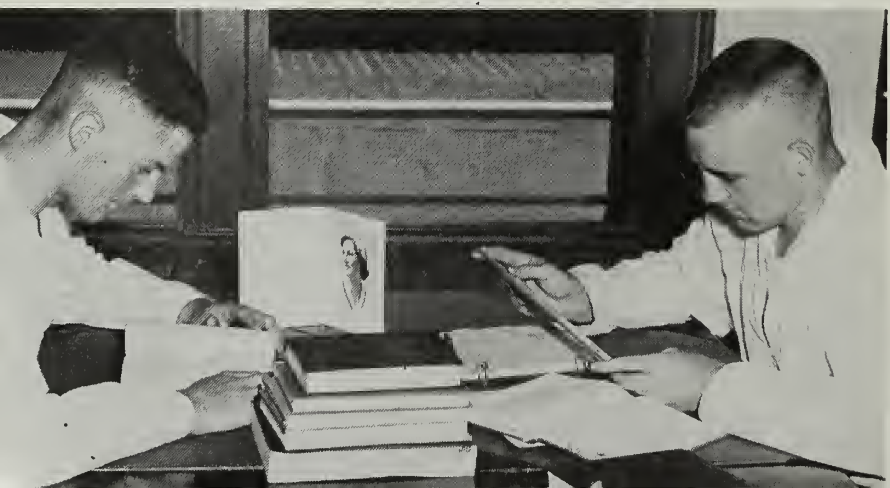
The educational program will give you a Bachelor of Science degree. This degree is accredited, based upon the humanities and sciences, together with the knowledge and concepts of the naval profession.

A break-down of the courses shows 37.1 semester hours of social-humanistic studies; 77.1 semester hours of scientific engineering; 37 hours of military-professional work, and 4.8 hours of physical education, for a total of 156 semester hours during the four academic years, exclusive of summer terms.

Quite an education, you say? But what's it all for? Perhaps a quote from the Chief of Naval Personnel will answer that question: "The Academy is a place where *young* men are imbued with the motivation for service which makes them dedicated naval officers." Not only *dedicated*, you must be *able*. The two go hand in hand. And ability is strengthened by the study you do.

So suppose as an enlisted man

STUDY TIME—For each hour in class Academy students study for an hour.



you are appointed to the Academy. What then, what can you expect?

For one thing, you can expect one of the very finest collegiate educations. You can also expect to work at your utmost capacity for the next four years. From Monday morning until Saturday afternoon, you'll be heaving around.

You will follow a tight, well-planned routine from reveille to taps. This rigorous routine and discipline is one of the primary differences between the Academy and a civilian college or university.

The typical daily schedule runs something like this: Up at 0615, you have 30 minutes to get yourself squared away for breakfast formation. Until 1630 you are busy with study and recitation. You are then free to indulge yourself in exercise or to work at extra-curricular activities or sports—either varsity or intercompany—until 1900.

Socially speaking, the high point of the day is the evening meal. Then, you have a study hour. That ends at 2145. Fifteen minutes later you are turned in. This, generally speaking, is the plan-of-the-day repeated the next day, and the next.

cademy!

Your day is divided between individual study and group recitation and practical drills. Your time is allocated so you will have one hour of preparation for each hour of class work.

(Don't assume that you can slide by without using that hour of preparation for class, either. Classes are usually limited to 14 students and it is assumed that every man is prepared to make an intelligent contribution to each day's studies. If you're the type that learned to "cram" before an exam, forget it. It won't work at the Academy. In a sense, every day is exam day.)

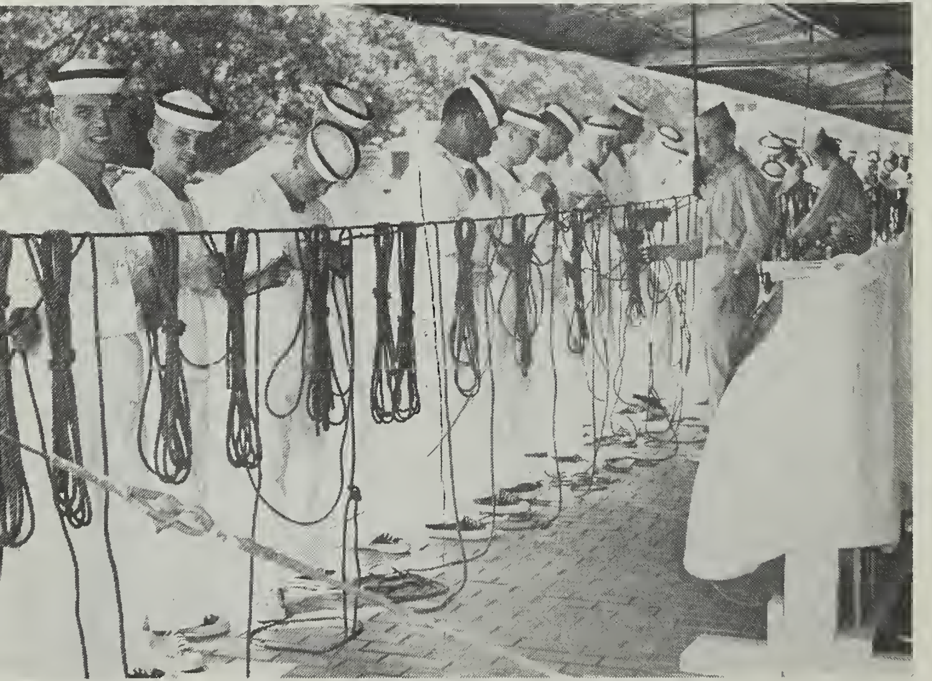
You'll have to learn to stand on your own two feet and answer the tough questions that will undoubtedly be cast your way. You'll have to know your subject by digging out the meaning of the text, and you must be capable of presenting it to the class (and the instructor) in a logical fashion.

But you'll survive. It will even start to look easy. Then, when you become a First Classman (senior)

SEA SCHOOL—Topside classes give midshipmen up-to-date training. *Below:* Plebe year ends with rush to get hat on top obelisk. Tradition says owner of first hat to cap the monument will be first of class to make admiral.

LEARNING BY DOING—Midshipman takes over wheel watch at sea during one of the summer cruises.

you'll be called upon to make after-dinner speeches before your skeptical and highly critical classmates. You'll survive that, too. As one newly-graduated ensign said: "Anything will seem easy now."



ROPE TRICK—Marlinespike seamanship plays an important part in the indoctrination of new plebes. Here, class of 1959 receives some salty training.

It's tough. But as a former enlisted man, you'll have one big advantage over those entering the Academy directly from civilian life. Much of the Navy talk, Navy way of saying and doing things, and ordinary naval routine will be familiar to you. Take watch standing, for instance. You know all about that. Before you make ensign, you'll know more.

WILL YOU GET ANY FREE TIME? Certainly. Your weekend will begin on Saturday noon and will end at evening meal formation on Sunday night.

All midshipmen have an Annapolis liberty on Saturday afternoons, and the three upper classes also have Sunday afternoon liberty. When you rise to the lofty First Class, you are even allowed several weekends for out-of-town leave and may also leave Annapolis on holidays.

So you've had all this free time. Now back to work. What will you learn during your four years?

You will have two distinct types of instruction. One consists of the purely professional subjects relating to your naval profession. Seamanship, navigation, marine engineering, naval ordnance and electrical engineering are some of the included subjects you'll study in this field.

The second field covers the disciplines to develop the mind, the body, the character. Mathematics, chemistry, physics, English composition both oral and written, literature, foreign languages, history including naval, modern and diplomatic—these provide mental discipline. Physical training provides the bodily discipline, and military training the character discipline.

That isn't all, though. A large part of your training is going to come from your summer cruises. Here again, if you are a former enlisted Navyman, you will have a big advantage over your more lubberly classmates.

During the three months of summer cruise time, you will find billets in operating ships, either a cruiser, destroyer, or aircraft carrier. One summer you will take part in an amphibious exercise and in naval aviation indoctrination.

ALL VERY NICE, you say. A fine college education, and a career as a naval officer. But what are the basic qualifications?

Here you are. To be considered, you must:

- Be a citizen of the United States.
- Be not less than 17 nor more than 22 years of age on 1 July of the calendar year in which you plan to enter.
- Be unmarried and never have been married.
- Be of good moral character.
- Meet the educational qualifications and U. S. Naval Academy aptitude tests.
- Be recommended by your commanding officer.

NOW—IF YOU CAN MEET the above qualifications, check the following entrance methods which may apply to you:

- *Direct from active duty*—The Secretary of the Navy is authorized to appoint each year 160 men from the Regular Navy or Marine Corps and *another* 160 men from the Reserve components.

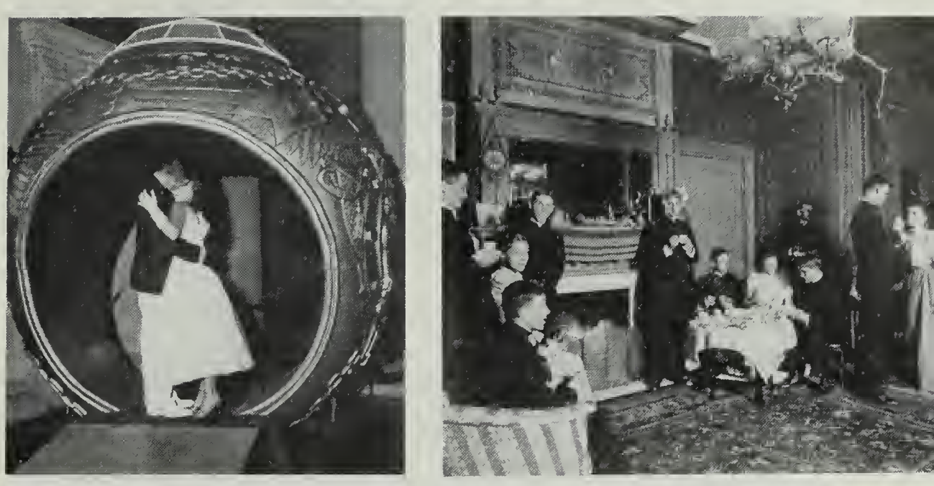
As a rule, if you are on active duty at the time of your nomination, you will enter the Academy via the Naval Preparatory School at Bainbridge, Md. Application is made via your commanding officer. Then you take a test.

The results of the exam and your CO's recommendation are forwarded to the Chief of Naval Personnel, who makes the selection.

When you are selected, you are enrolled in the Naval Preparatory School which commences usually in the first week of September. This prep course will help you prepare for the Entrance Examination which is given in March of each year.

The educational requirements for active duty personnel are three years of high school (or the equivalent) and credit of two years of either algebra or geometry, or one year of each.

- *From inactive duty*—Naval Reservists on inactive duty are eligible provided they were members of the Naval Reserve at least one year by 1 July of the year in which they are appointed. Drill attendance must be satisfactory and they must have performed at least 14 days' active duty for training. Applicants must be recommended by their COs and must meet the same mental and physical requirements as other candidates. Inactive personnel are also required to take the entrance examinations given in March. The same rules apply to the Marine Corps Reserve.
- *By Presidential or Congressional appointment*—The President makes 75 appointments each year from the United States at large to sons of Regular service personnel. The Vice President and each Senator, Representative and Delegate in Congress is allowed a maximum of five midshipmen at the Naval Academy at any one time.
- *Sons of deceased veterans* (Regular or Reserve), if the parent's death can be attributed to service in World War I or World War II.
- *Sons of holders of the Medal of Honor.*



TRADITION—Kiss in ring is part of June Week celebration when second class men are about to become first. *Rt:* Midshipmen of 1883 turn to for tea time.

On being admitted as a midshipman, you must deposit $100, which will not be refunded. The sum of $600 will be advanced to your account to pay for your uniforms, clothing, textbooks and miscellaneous items. This will be considered an obligation against your account until enough credit has accumulated from your salary to liquidate the debt. You may, however, pay this amount from your own funds at any time.

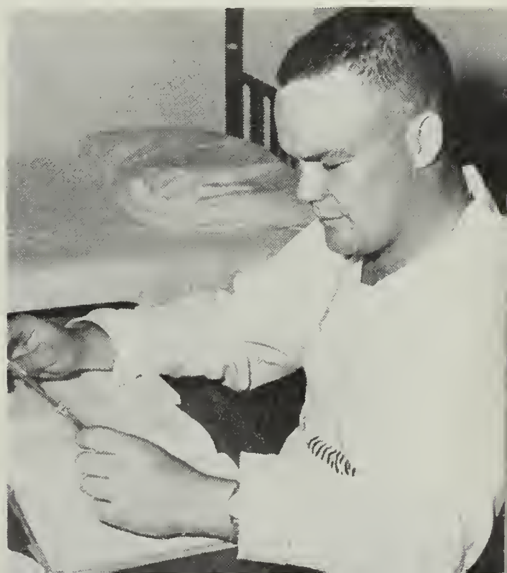
You will be paid $115.15 a month, plus a ration allowance. The ration allowance (now $1.35 a day) takes care of your board, and your pay is intended to provide your uniforms and clothing, textbooks and equipment, sundries, services such as laundry, tailor, cobbler and barber, allowance for extra-curricular activities, leave money (but only if you have a healthy balance in your account), payment of income tax, and the purchase of necessary uniforms and equipment for your graduation so that you will be ready to assume the duties of a commissioned officer. Medical, dental and hospital services are, of course, provided without charge.

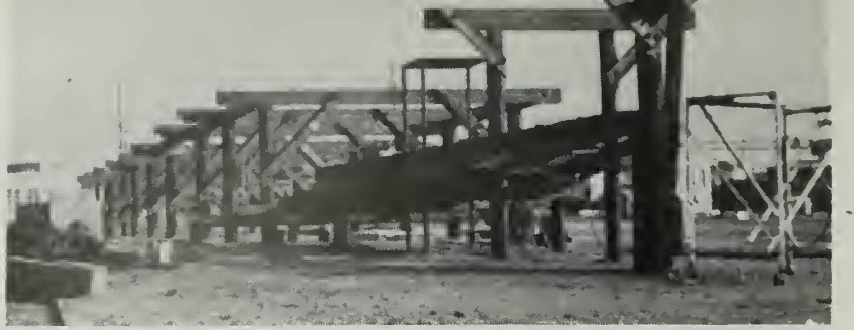
You won't be living a life of ease and plenty. It is not intended that you do. You will, however, be living well. And—you will live within your income.

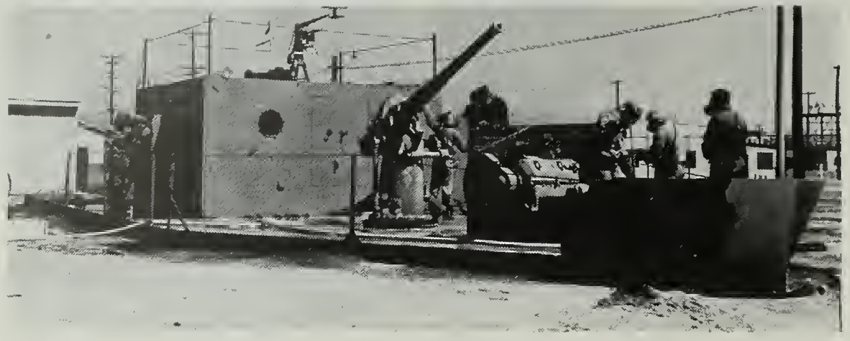
So—you graduate. You become an ensign in the Navy or a second lieutenant in the Marine Corps. You are well prepared for your career in the naval service. You have faced some of the most interesting—and toughest—years of your life. You are prepared to serve your country, you are prepared to take higher degrees at a naval postgraduate school or at a large civilian university. You are not only trained in engineering and the sciences, but you are up to date in history and the other social sciences.

You are prepared, you are the future admiral.

SMOOTH SAILING—Midshipmen parade showing precision form that has become famous. *Rt:* Back to the books.







KEEL AND mock-up included deck, three-inch gun, winches, piece of bow. *Below:* Deck house was first used for biological-chemical defense classes.

The Good Shi

ARRIVING AT NAVAL STATION, Treasure Island, with orders from the Chief of Naval Personnel to teach Biological-Chemical defensive measures at the Damage Control School, CDR John H. Stover, MC, USN, had the bright idea that simulated "real-life" shipboard conditions would be a big help in teaching the course. That idea, plus plenty of willing hands, plus help from Navy headquarters, resulted in *Pandemonium*. Here's the story:

There was no ship in the area that could have answered the needs of the course.

Even if there had been, it would have been a tough job to obtain exclusive use of it for class-room studies.

But—*parts* of ships would provide the same desired simulated effect in demonstrating the use of modern techniques. There was a deck house handy, and it was not in use.

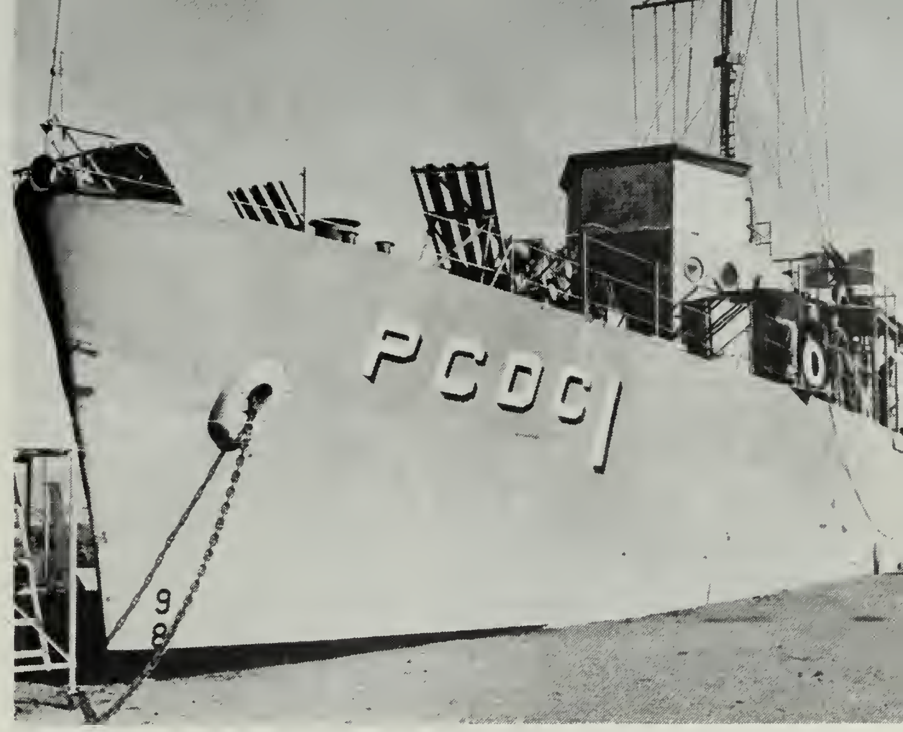
From various naval installations in the area came promises of "junk," surplus gear, scraps for enlarging the "mock-up" to include a partial deck, some old guns, winches and a bit of hull at the bow.

As soon as the promised materials began to arrive, labor was performed by the personnel of the service school command and through the Naval Receiving Station in the form of transient personnel. Soon students "came aboard" for training, learning through actual demonstration and practice.

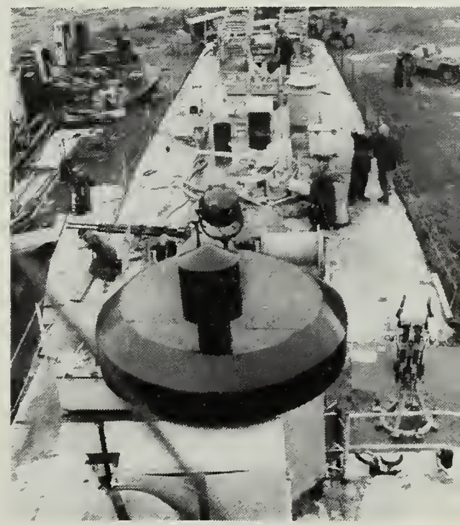
Through the chain of command

PILINGS were set up and readied for *(below left)* deck house and *(below right)* partial deck to be swung into place.

Pandemonium'



FINISHED and complete to minute details, PCDC-1, is ready for use as classroom-workshop to teach defense measures. *Below:* Surplus gear is assembled.



application was made to the Bureau of Ships for funds to sink pilings and raise the deck to the level of an actual PC-type vessel for better simulated working conditions. BuShips, realizing the value of such a project, made the funds available. Later, pilings were sunk and the deck house and partial deck were hoisted into place upon them.

This odd-looking vessel with only deck house and partial deck, looked somehow like a house on stilts, with no underpinning.

But now more scraps began to arrive, metal pieces, hatches, and fittings. Plans and photographs of a PC-type vessel were procured, and construction continued.

Fifteen months later, in February, 1957, the "ship" had progressed to an undreamed-of stage. She now measured 173 feet in length, 24 feet at the beam.

BuShips provided money for steel, a wash-down system and utilities and had given cooperation in procuring the many miscellaneous items of equipment.

Bureau of Medicine and Surgery gave financial aid and equipment for shipboard laboratories. BuPers provided funds for shore connections to run the utilities to the ship, and aided by procuring items of equipment including surplus guns, compasses, electrical gear, flags, sextants, and binoculars. A "ship" was taking shape.

On 1 Feb 1957, ceremonies for christening the strange craft were held at the Atomic-Biological-Chemical Defense section of the Naval Schools Command at Treasure Island.

The name *Pandemonium* had been decided upon, since it best described the little ship's decks immediately following a simulated attack by enemy forces.

At the ceremony, the Twelfth Naval District Band struck up the National Anthem, the Jack was hoisted, and USS *Pandemonium* (PCDC-1) swept down the ways Here, thanks to a bright idea, students will sail through many years of classroom studies learning defensive measures againt biological and chemical attack.

—H. Ellis, JO2, USN

HULL and superstructure begin to shape up. Shorebound *Pandemonium* will sport mast, ammo boxes, twin 20mm guns.

LETTERS TO THE EDITOR

Battleship Broadsides

Sir: Can you dig up answers to the following questions? 1) Can a modern U. S. battleship, while cruising on a straight course at full speed, and with both forward turrets trained dead ahead, fire both turrets without damaging the turrets themselves or the surrounding structure? 2) Can a battleship fire a full broadside while cruising at either full or minimum speed without causing undue handling difficulties? 3) Can a battleship, while executing a hard turn, fire a full broadside in the direction of the turn without causing excessive roll? 4) And, finally, how far is a battleship pushed by the recoil of a full broadside?—J. G. E., Kansas City, Mo.

• *With the Navy's Bureau of Ordnance located in the same area, we didn't even have to dig. Their experts read your letter and furnished the following answers:*

1. A modern U. S. battleship can, while cruising in a straight line at full speed, fire both forward turrets at the same time with both turrets facing absolutely straight forward without damaging the turrets or their surrounding structure.

2. A battleship can fire a full broadside while cruising at full or minimum speed without experiencing any undue handling difficulties.

3. Providing she does not endanger her own ship structure (whereby firing cutout cams would become engaged), a battleship can fire a full broadside while executing a hard turn.

4. The recoil of a full broadside would push the ship over about two feet.—Ed.

This section is open to unofficial communications from within the naval service on matters of general interest. However, it is not intended to conflict in any way with Navy Regulations regarding the forwarding of official mail through channels, nor is it to substitute for the policy of obtaining information from local commands in all possible instances. Do not send postage or return envelopes. Sign full name and address. Address letter to Editor, ALL HANDS, Room 1809, Bureau of Naval Personnel, Navy Dept., Washington 25, D. C.

First Fleet-Wide Examination?

Sir: What was the date on which the first service-wide competitive examinations for advancement to PO3, PO2, PO1 and CPO were held after World War II? I understand the first exam for CPOs was held in 1948; others say it was first held in 1950. Who is correct?—D. C. G., SMC, USN.

• *It just depends on your definition of terms. A form of competitive servicewide examinations for advancement to CPO was estabilshed in 1946 by BuPers Circular Letter 191-46 but it was not the same as that in use today. The form of the CPO exam used in 1948 closely approximated that now in use; however, the current servicewide examining system for* ALL *petty officer pay grades did not go into effect until July 1950 under BuPers Circular Letter 12-50. This letter, which became effective 1 Jul 1950, established the examining system in essentially the same form as it exists today.*—Ed.

Travel Authorization By Transciever

Sir: My question concerns the authorization of travel via privately owned vehicle between two permanent duty stations under the transceiver system of transfers. Is it still necessary to obtain specific approval to travel in this manner? If so, how is the authorization cited in the transceiver system of transfers?—G. W. L., PN1, USN.

• *When the transfer directive (including directives received under the transceiver system) does not specify any instruction prohibiting the use of a privately owned vehicle, the detaching commanding officer can grant permission to you to travel in your own automobile between your old and new permanent duty stations. The officer is authorized by Art. C5317(2)(b) of "BuPers Manual" to approve such means of travel. You wil find this authority emphasized in paragraph 8 of BuPers Inst. 1306.58A.*—Ed.

ALL AT ONCE—USS New Jersey (BB 62) fires nine 16-inchers in one salvo while shelling coast in Korean conflict. Water shows push of the broadside.

Enlisted Precedence

Sir: I have several questions in reference to your article, "Enlisted Precedence," on page 11 of the July 1956 issue of All Hands.

To my mind, Article C-2102 of the *BuPers Manual* does not clarify these questions.

In the case of personnel in pay grade E-7 who have broken service (E-7 when discharged and E-7 upon re-entry into the service):

1. Would the time in pay-grade E-7 be considered continuous, regardless of the amount of actual day-for-day service?

2. Would the date of precedence change because of the broken service?

3. Would the date of precedence change if he went into the active or inactive Reserve during his period of broken service?

4. Would an involuntary recall to active duty have any bearing on the above questions?—R. S. G., AEC, USN.

• *Article C-2102 has been revised to clarify this question. It will be promulgated by Change No. 24.*

In the case of a man who has broken service, time in pay grade would not be considered as continuous. His precedence in pay grade would date from reenlistment after broken service.

Also, the date of precedence would change if he were to go into the active or inactive Reserve during his period of broken service.

Precedence, in this case, would start with the date of commencement of continuous service, including both active and inactive naval service.

Involuntary recall to active duty would have no bearing on precedence which is based solely upon time of advancement to present pay grade, provided continuous service conditions have been maintained.—Ed.

G.I. Bill and MOP

SIR: I enlisted in the Reserves in April 1953 and attended meetings in a drill pay status until Sept 1955, after which time I began serving my two years of obligated service on active duty. I believe a great many Reservists, including myself, would appreciate some information on the following:

First—Am I entitled to any of the benefits of the GI Bill?

Second—Will I be entitled to mustering out pay when I'm separated from active duty?

Third—Will I be compelled to attend drills with my Reserve unit upon completion of active duty?

Fourth—Why is it that some Reserves have a six-year military obligation, while others are obligated for eight years? —H. T. D., SN, USNR.

- *The answers to your first two questions are both negative (and unfortunately, in this case, two negatives don't make a positive.*

To be eligible for either the GI Bill or mustering out pay you must have been on active duty during the period from 27 Jun 1950 to 31 Jan 1955 (inclusive). Therefore, since you didn't go on active duty until after the cut-off date, you're out of luck on both counts.

The answer to your third question is also negative—according to BuPers Inst. 1610.3B, persons who were members of the Reserve before 10 Aug 1955 have no obligation to participate in a training program at any time. However, you may voluntarily enter any training category in any training program for which you are otherwise eligible, and naturally you are encouraged to do so.

The date, 10 Aug 1955, also figures in the business of the six and eight year military obligations. Under the Reserve Forces Act of 1955 (Public Law 305, 84th Congress) a man who enlists in the armed forces for the first time on or after that date has a six-year obligation. The status and obligations of those who were members of the armed forces before 10 Aug '55 have not been changed. Consequently, they're still under eight-year obligations.

Now, is it safe for us to come out of the isolation booth?—ED.

Philippine Awards for WW II

SIR: I wish to inquire about the congressional approval necessary for individuals in the naval service to accept and wear decorations awarded by the Republic of the Philippines for service during World War II. I am aware of the regulations concerning the presentation of decorations and awards for the Korean conflict, but I have not been able to learn the approval needed for such awards during World War II.—J. B. Carpenter, Jr., LCOL, USMC.

- *The Philippine Presidential Unit Citation awarded to naval personnel for service during World War II has recently been approved by the Secretary of the Navy. Official information concerning this authorization will be published to the service in the near future.*

As for individual Philippine decorations, Private Law 850, 84th Congress, approved for certain members of the armed forces (listed within the law) the acceptance and wearing of decorations which had been tendered by the Philippine government. However, since this law did not provide "blanket" authority, the names of any recipients of Philippine decorations awarded after the passage of this law must be presented to the Congress for approval in additional legislation.—ED.

Quapaw the Best

SIR: We have been following your articles about length of time away from the United States with great interest. In the August issue you published an article about USS *Mataco* (ATF 86) returning to the states after serving continuously for three years in the Western Pacific; in the December issue USS *Ampere* (ADG 11) wrote that they too have served in the Western Pacific since 1950, which is over six years.

USS *Quapaw* (ATF 110) has been away from the United States since 1950, which is a better record than *Ampere*, as *Quapaw* is a rotated vessel.

We are as proud of our ship as any sailor could ever be for the below reasons:

- 1956 *Quapaw* had seven reenlistments, five of them first reenlistments.
- There has been no disciplinary problems because of the excellent morale of the crew.
- We have such an excellent training program that in a two-year period the average of personnel passing and getting rated has been 75 per cent.
- Of our five officers, and 66 enlisted personnel we have 42 dependents living in Pearl Harbor where we are home-ported.
- Recently we were awarded our fourth consecutive award for being in the top 10 per cent of our class of ships in ComServPac. (We believe this is some-what of an achievement in itself.)
- *Quapaw* steamed 19,666 miles in '56, and was at sea for 3312 hours.

Our motto is "No job too large, no task too small." We go anywhere, anytime, and can do anything. However all this is just routine for a ServPac ship for we serve the Fleet.

With due modesty we believe that *Quapaw* is one of the best (if not the best) ship in the Navy.—J. R. V., YN2, USN.

- *Any comments from* Ampere *or* Mataco *or other contenders? Please note that* Quapaw *is exercising "due modesty."*—ED.

Raising of USS Maine

SIR: To settle an argument with one of my cronies, can you furnish the year and date on which USS *Maine* was towed out of Havana Harbor and sunk in the Florida Straits?—J. F. P., LCDR, USN(Ret.).

- *According to the Naval History Division, Congress on 5 Aug 1910 passed a bill authorizing the War Department to raise* Maine. *She was finally floated on 2 Feb 1912, towed out to sea and sunk in the Gulf of Mexico on 16 Mar 1912.*—ED.

AT REST—USS *Maine* lay in Havana harbor from 15 Feb 1898 until she was floated on 2 Feb. 1912. On 16 Mar 1912 *Maine* was sunk in Gulf of Mexico.

Recording and Transcribing

SIR: I have a question concerning acceptable means of passing the stenographic requirements for YN1 and YNC. The BuPers 1400 Series and the *Manual of Qualifications for Advancement in Rating* states that any stenographic means, including machines, may be used.

My Chief in Charge says that tape-recording machines are not acceptable. I contend that they are. Who is right—T. R. F., YN2, USN.

- *That all depends on how you use the tape recorder.*

The Quals Manual (NavPers 18068, Revised) provides that "a machine for the purpose of taking stenographic notes is acceptable." This refers to an instrument of the Stenomask type, which records (for later transcription) the stenographer's own voice as he repeats what is said by the person giving dictation.

However, a tape recorder would be acceptable provided it accomplished the exact function of the Stenomask. This means that the tape recorder would have to be used to record only the voice of the individual taking the dictation. If the voice of the speaker were included in any way, it would not be the equivalent of Stenomask equipment and would not be acceptable.

The performance test is designed as a gauge of your speed and accuracy in recording and transcribing material spoken by someone else. Therefore, you'd be defeating the purpose of that test if you were allowed to record the voice of the person giving the dictation, since this would show only your ability to transcribe his words, and not your ability to record them.—ED.

Shipping Over Early

SIR: I reenlisted for four years in September 1953, but in order to complete a cruise I signed an agreement to extend my present enlistment until December of this year. Since the normal expiration of my enlistment is in September, is it possible for me to ship over three months early? Or am I obligated to serve until December before I can ship over? What shipping over privileges will I lose, if any?

I would also like to know if it is possible to take leave outside the continental limits of the United States?—J. M., SM2, USN.

- *BuPers Inst. 1133.4A states that persons who have agreed to extend their enlistments may be discharged up to one year before the extension would become operative.*

Reenlistment benefits are not affected when discharged within three months of normal expiration of an enlistment, or expiration of an enlistment as extended. In either case you would be considered as having fulfilled your enlistment contract and would not lose any privileges.

A Navyman with leave papers is permitted to leave the United States in accordance with the policy contained in Article C-11107 of the "BuPers Manual."—ED.

Just So It's Spelled Right

SIR: There has been quite a bit of controversy in our office regarding typist initials on official Navy correspondence. A few of my co-workers say the initials of your first and last name are to be used.

Crew Member Recalls Salty Anecdotes about USS Cole (DD 1

SIR: In the July 1956 issue of ALL HANDS, Master Sergeant L. L. V. A. had a query concerning the old four-stacked destroyer, USS *Alexander Dallas* (DD 199).

In your reply, you revealed some interesting history relative to the North African campaign.

Perhaps you and ALL HANDS readers would be interested in some further sidelights on this action in which the four ancient Greyhounds took a special part.

The four (there may have been five —USS *Ellis* (DD 154) may have been along in another group) were recruited from Destroyer Squadron 30 of which *Dallas* was flagship. The other three, *Cole* (DD 155), *Dupont* (DD 152) and *Bernadou* (DD 153) were from Div 60 of that Squadron.

While *Dallas* and *Dupont* were having their troubles in the Wadi Sebou area, *Cole* and *Bernadou* were finding it equally exciting with the Southern Attack Group in a little town called Safi in French Morocco.

Cole and *Bernadou* each carried two hundred specially trained night fighters and their mission was to land the troops in Safi harbor, take over key installations, and neutralize resistance before the dawn landings of the main assault force.

The two ships were especially overhauled for this mission and among other refinements their masts were sheared off at flying bridge level to reduce the silhouette to the horizon line.

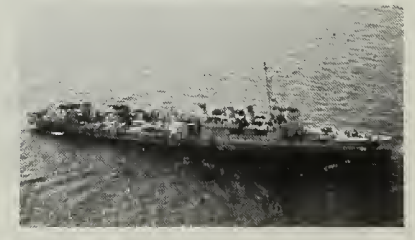
At 0400, 8 November, we commenced our approach on Safi harbor which required finding an extremely narrow entrance in total darkness. Here we had our first look at infrared lighting in practical use, as a free French patriot had swum out before our arrival and lighted the harbor entrance buoy with that invisible light.

Bernadou was in the lead with *Cole* some 1000 yards astern. All went well until we were abreast of the entrance jetty when we were suddenly raked with machine-gun fire from all sides, and pandemonium broke loose ashore. At this point we fired a roman candle that was supposed to burst over the sleeping city, unfurling an American flag to float down on a parachute, thus indicating to the rudely awakened townsfolk the identity of their invaders.

However, much to the disappointment of the fireworks lovers, this device didn't work, not that there weren't plenty of fireworks anyway. *Bernadou* returned the machine-gun fire and lobbed 3-inch 50s into the northern ridge that was known to be fortified, and with a burst of speed, crossed the small harbor and made an amphibious landing on a sand spit projecting from the eastern shore. In a matter of minutes our troops were ashore, including one of our seamen who went AWOL for a few hours to join the fighting. Each man was armed with a .45 caliber pistol and either a sub-Thompson, BAR or carbine for, according to plan, if we lost our ship, or if the raiders met stiff resistance, we were to join the fighting ashore. Fortunately, this plan was never placed into effect.

Meanwhile, as we sat high and dry on the sand bar, *Cole* was trying to make it alongside the dock at the north side. Naturally there were no line handlers standing by, and the ship was having some difficulty making the dock against the ebbing tide. She finally succeeded in getting a line with a grappling hook attached over and, with the grapple caught on a train track, was hauling the ship alongside. By this time, the soldiers we landed had advanced to the dock area and one of them, seeing the ship struggling with a line caught on the dock, whipped out his knife, slashed the line, and with a wave of his hand, dashed off into the darkness.

USS Ellis (DD 154)



USS Cole (DD 155)

I was taught at my first duty station to use the first and last letters of your last name.

I have checked every available manual concerning Navy correspondence and have been unable to solve the question.

Can you tell me who is correct on this matter? —T.F.B., YN 3, USN.

- *The "Navy Correspondence Manual" (Chapter II, paragraph 2a), states that the initials of the originator and typist are not required. A great deal of Navy correspondence does, however, have the typist's initials on it. Although there is no set procedure, the first and last initials are generally used.*

It is a matter of local policy. In other words, do it the way its done at your ship or station.—ED.

Other Four-Stackers Which Won Fame (and PUC) in World War II North African Campaign

With *Cole's* troops landed, and with the first light of dawn, while our topside men exchanged small-arms fire with a few snipers concealed in the breakwater wall on the south side, our attention was drawn to the shore fire from heavy gun emplacements on the ridge running north of the town.

This finally evolved into an artillery duel between, I believe, USS *New York* and one remaining shore battery dug into the cliff on the western point. From our position midway between the two duelists, we could observe the results of each salvo climbing the cliff closer and closer to the target. At last a salvo landed squarely on target and we cheered as the cliffside crumbled and a cloud of smoke hung over the point.

But our cheers turned to disbelief, then admiration, as a few moments later the shore battery returned the fire. *New York* landed at least three more salvos that appeared to be direct hits, and each time, as the black smoke cleared away and we knew it was the end, the battery answered the fire. Some of the men on deck actually cheered. Finally, the battery was stilled, but I saw men hours later casting searching looks at the northwest point. We learned later that the French offered only token resistance in North Africa, but that unknown gun crew apparently didn't get the word.

When the tide came in about noon, *Bernadou* was floated free with no serious damage, and we had no personnel casualties, despite the fact that the crew was armed to the teeth and the opportunity was present from all sides. The assault forces had landed, the beachhead was secured and the mission of the four-stackers was accomplished. All four were returned to the U.S., refitted, and went on to serve throughout the war.

There is one other four-stacker incident I should like to mention, and it is in the form of a legend which has persisted since I've been in the Navy. It runs like this:

When the same *Cole* was first commissioned, she was doing a full power run on her sea trials. During this run she clocked the measured mile at 55 knots. Understandably enough, the engineers and designers were astounded and ordered the ship back to the Navy yard where they tore down her engines in an effort to find the cause of this miraculous power. They found nothing however, and *Cole's* moment of glory had passed, for when the engines were reassembled, she could do only a humble 31 knots as four-stackers were supposed to do.

Is this only a fantail legend, or is it perhaps true? Or, does the truth lie somewhere in between? Perhaps ALL HANDS or ALL HANDS readers (pre-World War II vintage) can shed some light on this one. —Charles L. Lawrence, QMC, USN.

- *Mister, you really picked yourself a ship and our thanks to you for bringing* Cole *to our attention. It's yarns like yours that make our job really worthwhile.*

However, you neglected to mention another little incident that occurred only about a week later. In company with USS Stansbury *(DD180),* Cole *was ordered to meet* USS Electra *(AK21) and escort her to Fedela, French Morocco. Shortly after the rendezvous* Electra *was torpedoed and, 10 minutes later, asked* Cole *to come alongside and remove her crew as she was sinking. Within 15 minutes, some 336 crew members had been taken to the doubtful safety of* Cole's *decks, leaving a salvage party of 70 still on board.*

In spite of her overflow of guests, Cole *remained on anti-submarine duty while various means were tried to keep* Electra *from sinking.* USS Cherokee *(ATF 66) came alongside and pumped water from flooded compartments and then attempted towing, later returning to pump again. Meanwhile,* Stansbury *attempted to tow but was not too successful.* USS Bristol *(DD 453) joined with the other destroyers and her skipper took charge of the salvage operations.*

USS Auk *(AM 57) and* Raven *(AM 55) were ordered alongside to pump while* Cherokee *towed. This method proved successful.* Electra *and her flotilla arrived in Casablanca the following day.*

We also learned that, after the war, Cole *was converted to a miscellaneous auxiliary with the designator AG 116. Not long after that, with 26 years of successful service behind her, she was decommissioned on 1 Nov 1945 and later sold.*

For the incident you described, she received the Presidential Unit Citation and, in addition, earned three battle stars on the European-African-Middle Eastern Area Service Medal.

With this record behind her, there's little wonder that she should be reputed able to log 55 knots. However, the actual records are usually unkind to fantail gossip and this is no exception. We quote here from the memo submitted by our contacts in BuShips:

"Our experts believe that this story is just a legend and nothing more. Her trial speed is given in the 1945 Ships' Data book at 32.5 knots. USS Litchfield *(DD 336), for example, has a top speed of 35.2 knots at 30,600 shp (shaft horse power). A speed of 55 knots would require 170,000 shp or 5.5 times her maximum power.*

"One of the Bureau's personnel was on board Cole *in the Philadelphia Naval Yard while she was moored with other four-stackers. He was told then that* Cole *was the fastest ship in the Navy and had made 35 knots. The 55 knots is obviously impossible. It is apparently a distortion of the earlier figure, 35 knots."*

It's fellows like that who say there could never be such a thing as the Flying Dutchman.—ED.

USS Alexander Dallas (DD 199)

USS Bernadou (DD 153)

USS DuPont (DD 152)

Ship Reunions

News of reunions of ships and organizations will be carried in this column from time to time. In planning a reunion, best results will be obtained by notifying the Editor, All Hands Magazine, Room 1809, Bureau of Naval Personnel, Navy Department, Washington 25, D. C., four or more months in advance.

- USS *Mullany* (DD 528)—The first annual reunion for all former crew members will be held on 21 and 22 September in New York City. For further information, write to David Keller, 276 E. Houston St., New York 2, N. Y.
- USS *Owen* (DD 536)—A reunion will be held at the Hotel Sinton, Cincinnati, Ohio, on 31 August, 1 and 2 September. Because of space limitations, reservations should be made well in advance. If you plan to attend, send acknowledgement to John Horst, 10214 W. Armitage, Melrose Park, Ill.
- *16th Seabees*—The next reunion will be held at the Mark Hopkins Hotel, San Francisco, Calif., on 19, 20 and 21 July. For details, contact 16th Seabee Association, 1246 Addison St., Berkeley 2, Calif.
- *24th Naval Construction Battalion*—A reunion will be held at the Hotel Statler, New York, N. Y., on 16, 17 and 18 August. For additional information write to G. G. Fitzpatrick, 16 W. 10th St., New York 11, N. Y.
- USS *Douglas A. Munro* (DE 422)—All former shipmates interested in holding a reunion, contact E. S. Stevens, Box 140, Litchfield, Conn., and state preference for time and place.
- USS *Brooklyn* (CL 40)—A reunion for all former shipmates will be held 27 July 1957 beginning with a picnic at 1000 in Fleet Park, Hampton Blvd., Norfolk, Va. For further information, write Alford W. Wells, PNC, USN, 1316 Oakpark Ave., Norfolk, Va.

Making Weather Entries in Port

Sir: Knowing that the Bureau of Naval Personnel is interested in the accuracy of the Ship's Log, I would like to make a suggestion.

On DDs or smaller ships, where there are often not enough quartermasters to keep the Weather Sheet in port, wouldn't it be more practical to make an entry such as "Same as SOPA in USS *Bennington* (CVA 20)"—rather than letting some untrained man keep up the sheet?

The need for keeping up this sheet in a port where there are no naval facilities is clearly seen, but in places like San Diego, Seattle and Long Beach, it seems to me that "Same as SOPA" would be a lot easier and much more accurate.—T. E. S., QM3, USN.

• *Since early 1954 the Ship's Deck Log and requirements pertaining to it have been under study in an effort to reduce the paperwork involved, yet still retain the essential elements necessary for a complete log. In this connection the requirements for recording weather data are being revised and simplified. Weather observations recorded in a port where there is a Fleet Weather Central or other well-established weather agency are not generally used in weather research or forecasting. However, these observations are needed for the ship's daily operational use and certain legal purposes (since the log is sometimes used as evidence before courts and legal bodies).*

Even where actual safety is not involved, possible damage to the ship, small boats or equipage can be minimized through precautions based on accurate weather observations. For example, if the Officer of the Deck is not aware of unfavorable changes in the weather he might allow small boats to be dispatched without adequate preparation for bad or squally weather, personnel might be endangered, the ship might drag anchor, mooring lines might part or small boats could become adrift—even though the weather isn't bad enough to warrant warnings or other alerts.

At the discretion of the CO, hourly weather entries may be omitted under these circumstances:

- *"When in a naval shipyard undergoing overhaul.*
- *"When two or more ships are moored in the same nest or in the same general group while moored alongside a pier and the senior officer present in this group or nest has designated one of these ships to take the hourly weather obervations. A ship thus designated should be assigned additional responsibility to see that other ships of the group are adequately informed of any changes in the weather or weather trends that may affect the safety of the ships, their small boats, personnel or equipage. Other ships in the group should make an entry in the weather table; i.e., 'See log of* USS *........'"*

In addition to all this, making weather entries in port is excellent training and helps to keep the watch on its toes. And, there should be no such thing as an untrained man keeping up the weather sheet, for instruction in weather characteristics is supposed to be a part of every seaman's training.

On the surface your suggestion would appear to be a good one, but as you can probably see by now, the Navy has some pretty sound reasons for handling this matter the way it does. Don't give up though—suggestions like yours sometimes turn out to be diamonds in the rough.—Ed.

Sailor from 'Old Ironsides'

Sir: As much as I have read your magazine I have never come across any article on my ship, and she is one of the best known in the Navy—USS *Constitution* (IX 21).

"Old Ironsides" has a great record behind her. She has been in 40 naval engagements and four major battles, including her famous fights with the British ships, *Guerriere*, *Java* and *Cyane* and *Levant*.

This October will be the 160th anniversary of her launching, and she is the oldest commissioned ship in the Navy today.

I am really proud of her, as is everyone else in her crew. We have some 2400 visitors on board each weekend, so she must be pretty popular.—J. R. S., SA, USN.

• *Perhaps you haven't been reading* All Hands *long enough, or you'd have seen* Constitution *mentioned plenty of times. If all the words we've written about her were laid end to end, we could probably fill several issues with them. However, if we did, we'd be slighting the accomplishments of many other ships with fine records.*

It's easy to see why you're so proud of your ship, but as you say, "she is one of the best known in the Navy."

Incidentally, the history books have covered her lengthy career in detail.—Ed.

Final Multiple in Exam

Sir: In a letter to the editor published in the Oct 1956 issue of All Hands, you stated that all personnel are advanced to pay grade E-7 in strict accordance with their numerical standing on the final multiple listings for their particular rate.

If the Bureau practices what it preaches, why then was an individual who took the exam in February 1955 advanced with a 96.34 multiple while another with a final multiple of 97.34 was not? . . . R.W.H., YN1, USN.

• *Sounds as though you have a logical gripe* BUT. . . .

As we previously stated, all candidates for CPO are advanced strictly according to their final multiple standing provided they fulfill all requirements for advancements. *This includes attaining a* passing score *on the examination.*

It is possible in some instances for persons who fail their examination to get a higher final multiple than others who pass. That's what happened in the case you cited. If you pay close attention to the examination results sent out by the Examining Center, you'll notice that in addition to giving your final multiple they state whether you failed or passed your exam.—Ed.

Temporary and Permanent WOs

SIR: I have four questions: Can temporary or permanent warrant officers voluntarily revert from one status to another? If so, when? When can a temporary WO become eligible for permanent appointment? I understand that if an enlisted man in the E-6 pay grade is temporarily appointed WO, and involuntarily reverted, he could only be set back to the E-7 pay grade. Is this correct?—C. A. J., YN1, (SS) USN.

- *A temporary warrant officer may revert to the enlisted status; permanent WOs may not.*

The temporary warrant may request at any convenient time to go back to the enlisted status.

A WO in a temporary status need not continue as such for any certain length of time before becoming eligible for a permanent appointment; but the former status does not necessarily lead to the latter.

A man in the E-6 pay grade who is temporarily appointed a WO may be promoted to E-7 upon completion of his tenure in the warrant grade. He must, however, have the required amount of time in the E-6 grade and be recommended by his commanding officer before his reversion to qualify for this jump in pay grade.

This subject is covered in BuPers' Inst. 1437.B.—ED.

USS QUAPAW (ATF 110) stands at anchor in Sasebo, Japan, harbor. Motto is: 'No job too large, no task too small. We go anywhere, anytime, do anything.'

K-9s in WW II

SIR: I have a few questions regarding the dogs used by the Army during World War II. Were the K-9s insured for 10,000 dollars with the beneficiary being the owner of the dog?

Did the dog and its trainer receive corresponding pay with the dog's pay going to the owner? And were the dogs progressed in rank at the same time as their trainers? I would also like to know what the ration allowance for a dog was per month.—A. H. E., AO1, USN.

- *Dog-gone if you don't ask some rough questions. According to official Army sources dogs were not advanced in rank nor were their owners paid on the same basis as the Army trainers. Also the dogs were not insured for 10,000 dollars.*

The amount of rations for the K-9s depended entirely upon the current prices of meat and dog biscuits. One and one-half pounds of each was the basic ration for a dog.—ED.

Next Step Up the Navy Ladder

SIR: I participated in the special examinations in November for critical or emergency rates and was rated in Feb. '57.

Will I be permitted to take my exam for second class in August or November?—J. F. B., RM3, USN.

- *If you were rated PO3 (E-4) on 16 Feb 1957, you will be eligible so far as service requirements (time in pay grade) are concerned, for advancement to pay grade E-5 on 16 Feb 1958—when you have completed at least one year in pay grade E-4.*

This means you'll be eligible to participate in the February '58 exams and be advanced in May '58 if qualified in all other respects. Even if you fulfilled your service requirements at an earlier date, Feb '58 would be the earliest you could take your exam, as examinations for pay grade E-5 are conducted only twice each year—February and August.
—ED.

Making Permanent Chief

SIR: I have been puzzled as to what's necessary to have my acting CPO appointment made permanent. Do I have to initiate action or what?—G.E.L., MMCA, USN.

- *Well, Chief, if you have completed three years' service in pay grade E-7, your CO should submit a request to the Chief of Naval Personnel recommending that you be issued a permanent appointment. Paragraph (9) of Part 1 of Enclosure (2) to BuPers Inst. 1430.7C spells out the normal procedure*—ED.

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Government Printing Office
Washington 25, D.C.

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LOOK SHARP-

Ashore you represent the Na
represent the United States.

HAT—Wear squarely on head, bottom edge horizontal. Do not roll, bend or crush brim. Keep spotless. Replace when permanently spotted or frayed. Wear your correct size. Wear white hat with diagonal woven seam of brim to the rear.

NECKERCHIEF—Press and roll only. Do not press flat after rolling. Upper edge of knot should be even with point of V on the jumper. Tie large knot. Keep ends even.

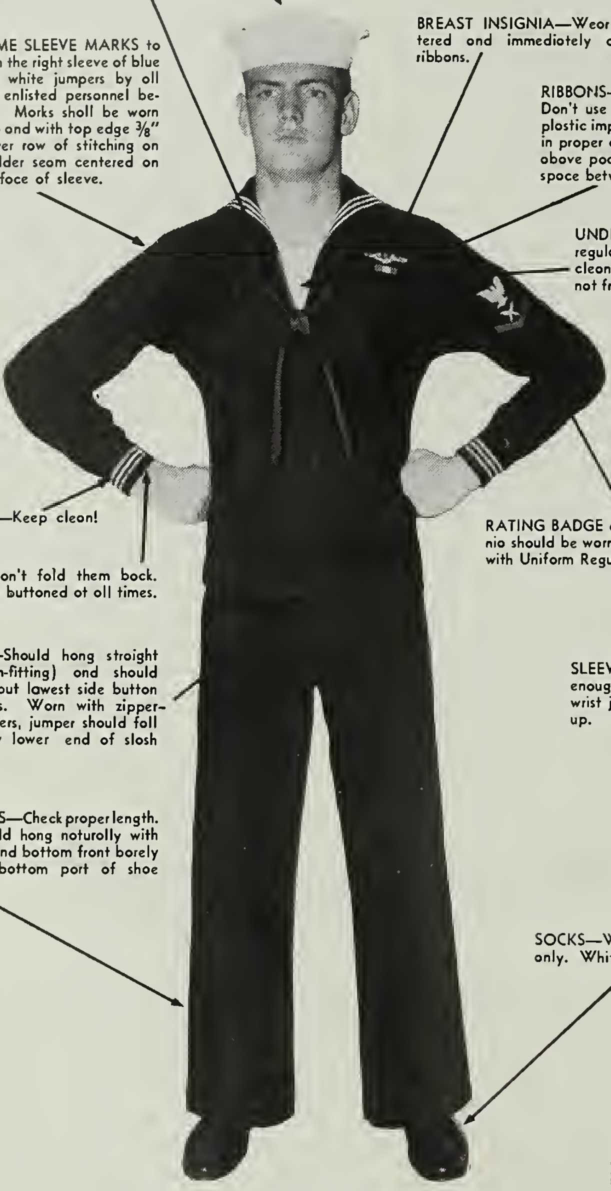
SHIP-NAME SLEEVE MARKS to be worn on the right sleeve of blue dress and white jumpers by all shipboard enlisted personnel below CPO. Marks shall be worn parallel to and with top edge 3/8" below lower row of stitching on right shoulder seam centered on the outer face of sleeve.

PROPER FIT—Uniforms must be made according to regulations. Avoid tailor-mades that are so form-fitting that you will soon grow out of them. Cloth should fall straight. Keep them neatly pressed.

BREAST INSIGNIA—Wear centered and immediately above ribbons.

RIBBONS—Wear regulation only. Don't use cellophane covered or plastic impregnated types. Wear in proper order. Bottom row 1/4" above pocket and centered. No space between rows.

UNDERSHIRT — Wear regulation style only, clean, close-fitting and not frayed.



STRIPING—Keep clean!

CUFFS—Don't fold them back. Keep them buttoned at all times.

RATING BADGE and other insignia should be worn in accordance with Uniform Regulations.

JUMPER—Should hang straight (not form-fitting) and should cover all but lowest side button of trousers. Worn with zipper-front trousers, jumper should fall 1/2" below lower end of slash pocket.

SLEEVES should be long enough to reach the wrist joint. Do not roll up.

TROUSERS—Check proper length. They should hang naturally with no break and bottom front barely touching bottom part of shoe lacing.

SOCKS—Wear regulation black only. White no longer authorized.

DRESS BLUES

HAIR—Keep sides and back closely trimmed. Top hair
to be not more than three inches long. Shave daily.

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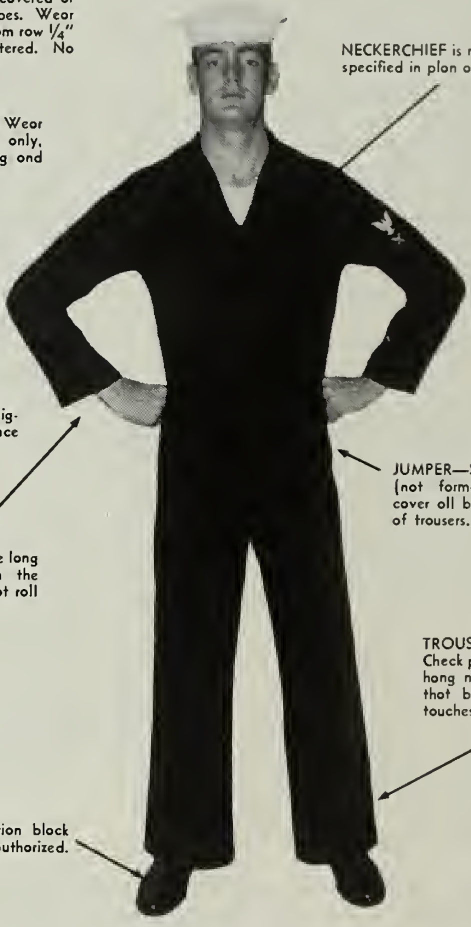

NECKERCHIEF is not worn unless specified in plan of the day.

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UNDRESS BLUES

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POSTURE—The straighter you stand the better you look. Hold that waistline in. Shoulders back!

SHOES—Keep them in g
tam. Solid soles and heel

Prepared by ALL HANDS Magazine

AR IT RIGHT !

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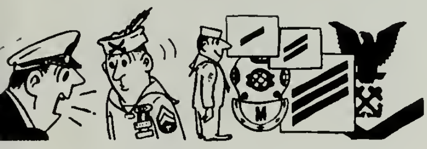
p! All eyes are on you.



SIGNIA—Only military insignia are authorized on
uniform. Check Uniform Regulations for position.

PERSONAL GEAR—Pencils, identification cords, cigarettes, jewelry, wallets, should not be carried where they can be seen. Wrist watches, ID bracelets and inconspicuous rings are permissible.

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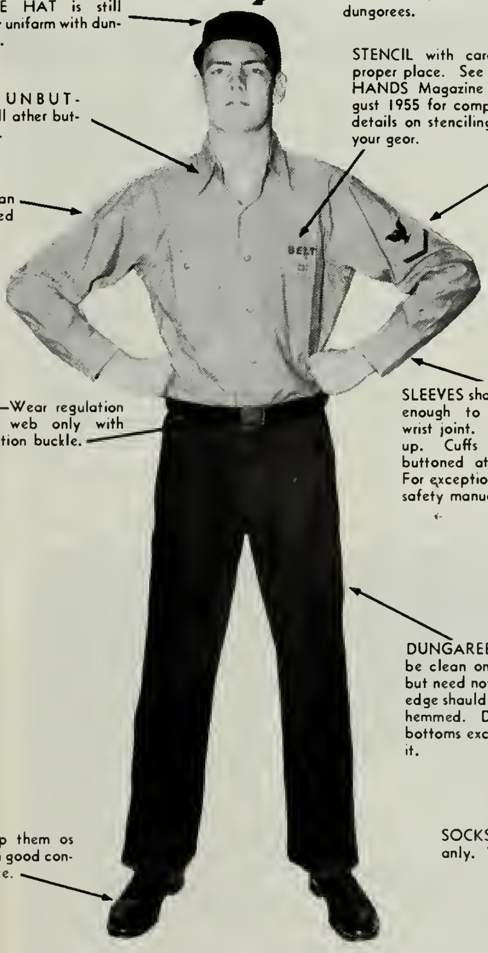

BLUE WORKING CAP (baseball type) is now authorized for wear with dungarees.

HITE HAT is still
per uniform with dun-
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STENCIL with care in proper place. See ALL HANDS Magazine August 1955 for complete details on stenciling all your gear.

"IRON-ON" RATING BADGE worn by all petty officers except CPOs. Center vertically between elbow and shoulder line. Rear edge of badge to be lined up with the side view center line of sleeve.

T—Wear regulation
ck web only with
ulation buckle.

SLEEVES should be long enough to reach the wrist joint. Do not roll up. Cuffs should be buttoned at all times. For exceptions, see your safety manuals.

DUNGAREE TROUSERS—Should be clean and not torn or frayed but need not be pressed. Bottom edge should be cuffless and neatly hemmed. Do not roll or fold up bottoms except when job requires it.

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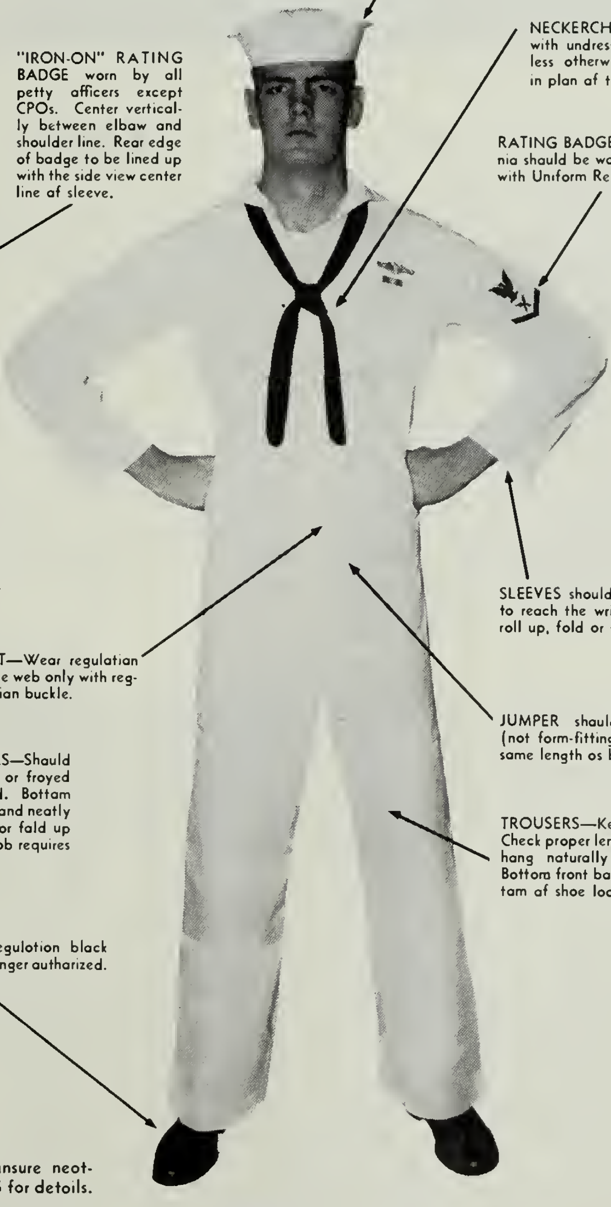
DUNGAREES



WHITE HAT—Wear squarely on head with bottom edge horizontal. Do not roll, crush or bend brim. Wear your correct size. Wear with diagonal woven seam to the rear. Keep spotless. Replace when permanently spotted or frayed.

NECKERCHIEF—Press and roll only. Do not press flat after rolling. Upper edge of knot should be even with point of V on the jumper. Tie large knot. Keep ends even.

NECKERCHIEF is worn with undress whites unless otherwise specified in plan of the day.

RATING BADGE and other insignia should be worn in accordance with Uniform Regulations.

SLEEVES should be long enough to reach the wrist joint. Do not roll up, fold or slide up.

BELT—Wear regulation white web only with regulation buckle.

JUMPER should fall naturally (not form-fitting) and should be same length as blue jumper.

TROUSERS—Keep them pressed! Check proper length. They should hang naturally with no break. Bottom front barely touching bottom of shoe lacing.

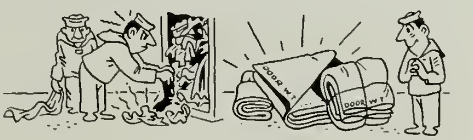
SOCKS—Wear regulation black only. White no longer authorized.

UNDRESS WHITES

• • • • • • • • • • • • • • • •

on top and bot-
red feet. Shine!

FOLDING YOUR UNIFORM properly helps to insure neatness. See ALL HANDS Magazine, September 1955 for details.



MOVING IN, team pauses to make contact with advance units. *Below:* Navy frogmen take big step to clear way.

Sixth Fleet's Sailors and

Amphibious landing craft, "Sea soldiers" and naval support ships have all been combined in drill to give another resounding wallop in beach landings.

Sixth Fleet sailors and Marines demonstrated how they keep in training during Fleet assault maneuvers on the beach at Porto Scudo, Sardinia. The exercise was labeled MedLandEx.

For two days before "assault" day, minesweepers such as USS *Sagacity* (MSO 469), *Vital* (MSO 474), *Pinnacle* (MSO 462) and *Nimble* (MSO 459) cleared the landing lanes, while underwater demolition teams from USS *Burdo* (APD 133) removed obstacles and provided beach reconnaissance. Shallow-water areas of mines were cleared by using small landing craft especially equipped with minesweeping gear.

Marines taking part in MedLandEx were put ashore by a 14-ship amphibious task force. Landing exercises were designed to give training in various phases and techniques of amphibious warfare to both sea soldiers and bluejackets operating

THE DEEP SWEEP—*USS Sagacity* joins other sweepers in scooping waters clean. *Right:* Bazooka team forms road block.

HEADS DOWN—LCVPs loaded with assault troops make beach run. *Below:* Sea soldiers go over side to landing craft.

Marines Maneuver in Med

amphibious ships. Wearing full combat uniform, the men received instructions on invasion procedure.

Poised off shore with strong-arm support were USS *Salem* (CA 139), *Wadleigh* (DD 689), *Remey* (DD 688), *Monssen* (DD 798), and *Cassin Young* (DD 793).

Close air support for the "assault" landing was furnished by the Attack Carrier Force of the Sixth Fleet.

Amphibious Beach Groups landed with the troops on the assault beach during the operation and helped make possible the smooth transition of an amphibious invasion from a water-borne to a land-borne operation. They set up radio communications on the invasion beaches, salvaged disabled landing craft in the surf zone and beach area, brought in the gear for unloading heavy vehicles, and directed traffic in the beach area—boat traffic in the surf zone and vehicular and personnel traffic across the beaches themselves.

Two hours after the first boat wave hit the beach, Marine troops had steadily progressed inland to join forces with other Marine units north of the objective area. This clinched a job well done.

SQUEEZE PLAY—With well deck of landing ship dock *USS Fort Snelling* (LSD 30) flooded, LCU 1487 is taken aboard.

★ ★ ★ ★ TODAY'S NAVY ★ ★ ★ ★

FUELING AROUND THE MED—*USS Mississinewa* (AO 144) returned to the States after a year with Sixth Fleet leaving a record she can be proud of.

Zuni Joins the Fleet

A new five-inch, high-velocity aircraft rocket named *Zuni* has been approved for operational use in the Fleet. It will replace the World War II "HVAR" (High Velocity Aircraft Rocket) in new, high-performance aircraft.

The new rocket has twice the velocity of the HVAR and its folding fins permit a plane to carry four times the former number of rounds.

Zuni was developed for the Bureau of Ordnance by the Naval Ordnance Test Station, China Lake, Calif. It is a folding-fin, solid-propellant rocket to be used on fighter and attack-type aircraft and is designed for both air-to-ground and air-to-air attack.

Extensive testing of *Zuni* has been conducted. These tests have proved that *Zuni*, in air-to-ground attack, will be effective against tanks, pillboxes, gun emplacements, trains, motor convoys, ammunition and fuel dumps, and small ships. As an air-to-air weapon, it will have a high kill-potential against aircraft because of its high velocity and consequent short time to target. One *Zuni* is capable of bringing down a jet plane.

The Naval Ordnance Test Station also developed the *Zuni* launcher, which holds four rockets and is used for transporting and storing the rocket as well as launching it. This will result in greater speed in rearming planes as they return to their bases between combat strikes and will, at the same time, bring about considerable money savings by eliminating the need for the conventional packing crates.

YESTERDAY'S NAVY

U. S. Fleet destroyed Spanish fleet as it attempted a sortie from harbor of Santiago on 3 Jul 1898. The Marine Corps was permanently established as a part of the Navy on 11 Jul 1798. Congress created grade of rear admiral for flag officers, 16 Jul 1862. On 25 Jul 1866, grade of admiral of navy was created and conferred on David Glasgow Farragut. Waves were first established as the Women's Reserve on 30 Jul 1942. On 31 Jul 1944, USS *Parche* (SS384) and *Steelhead* (SS280) launched a 46-minute attack on a Japanese convoy to sink or damage seven ships.

Accomplished Miss

When USS *Mississinewa* (AO 144) returned to the United States after a year in the Mediterranean area with the Sixth Fleet she probably left a record behind her that other tankers will find difficult to break.

Her accomplishments included refueling over 700 ships in her first nine months; 26 of these in one 24-hour period. In another 24-hour stretch she transferred 89 passengers by highline.

Her refueling operations were done in broad daylight with perfect weather as well as in the middle of the night with darkened ship and 40-knot winds. The task of transferring 1,000,000 gallons of fuel to carrier USS *Forrestal* (CVA 59) was not too big for *Mississinewa*. On the other hand, no job was considered too small, as she also delivered to minesweepers and smaller ships.

DD to the Rescue

Destroyers always make a good appearance slicing through the high seas, but one Sixth Fleet DD looked especially handsome to the crew of a coastal vessel fighting rough seas off the south coast of Italy.

The destroyer USS *William C. Lawe* (DD 763) was en route with three other destroyers from Valencia, Spain, to Taranto, Italy, when an "SOS" sent her racing at flank speed to the assistance of the Italian coastal vessel *Giacomo H. Altieri* which was sinking 20 miles off Cape Bonifati, Italy.

Lawe was 80 miles from the sinking ship when she received the distress signal.

Altieri's hull had been ruptured by the rough, high seas, which flooded her lower decks and were to send her to the bottom not more than three hours later.

On approaching the disaster scene, the destroyer was guided by two Italian seaplanes to a 12-foot dinghy carrying seven men and a dog, survivors of *Altieri*.

The ship's master, carrying the ship's papers and logs, reported the dog was the first to discover the ruptured hull and also the first to sight the rescuing destroyer steaming through 10-foot waves toward the dinghy.

After taking men, dog and dinghy aboard, *Lawe* reversed course to Messina, Sicily, original destination of the sunken ship.

Fueling Around in Mid-Air

Fighters and attack bombers can be quickly converted into aerial tankers, thanks to the new self-contained refueling unit now available for naval use. The in-flight refueling tank, carried under the fuselage, has been flight tested and is in production.

The torpedo-shaped aluminum unit is approximately 17 feet in length, is powered by a ram-air turbine driven by a four-bladed propeller on the nose, and contains hydraulic motors, fuel pump, a flexible hose on a reel, a collapsible drogue and, of course, fuel. The tank can be jettisoned in an emergency.

The Navy has selected this unit for use on the propeller-driven AD *Skyraider* attack bomber and the A4D *Skyhawk*, midget jet bomber.

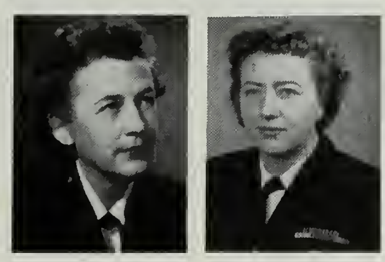
The refueling operation is controlled by the pilot of the airplane carrying the unit. Refueling is accomplished by the probe-and-drogue method.

The Navy is considering the usage of the tank for the so-called "buddy-mission," whereby two airplanes of the same type deploy together, with one refueling the other at mid-point and then returning to base.

Should an aircraft carrier or airfield be fog-bound, for instance, or a carrier-deck be temporarily unavailable for landing, airborne planes could be kept aloft for extended periods by refueling from this tank.

New Director for Waves

The Waves will have a new director in August. CDR Winifred R. Quick, USN, succeeds CAPT Louise K. Wilde, USN, who has held that post since June 1953.


CAPT Wilde CDR Quick

At present, CDR Quick is stationed in London where she is attached to the staff of the Commander in Chief, U.S. Naval Forces, Eastern Atlantic and Mediterranean. When she assumes her new post, she will become the fifth director to head the Waves since women entered the Navy in July 1942.

CAPT Wilde and CDR Quick were members of the first class for Waves at midshipman school in Northampton, Mass.

Super-Radars to Guide Missiles

Super-radars have been installed aboard USS *Canberra* (CAG 2) for guidance of her *Terrier* missiles. The massive, turret-like antennas for the new radar, resembling a gigantic searchlight, will provide the Navy's newest missile ships with added punch and power through increased accuracy and range.

The new radar system (called SPQ-5) gives exceptionally high performances for tenacious, stable guidance of supersonic missiles whether fired singly or in salvos.

The two SPQ-5 systems aboard *Canberra* combine many automatic radar functions in each unit. Either system can control the missiles from a single launcher or battery which fires the *Terrier* missile, or both radars can track different target groups simultaneously.

The SPQ-5 systems include flexible modes of scanning air-space miles beyond the horizon, providing the advantage of early warning. Individual targets can be selected from close-flying groups and tracked at great distances, while the missiles are launched and guided with extreme accuracy.

Nuclear Cruiser Contract

Work on the nuclear-powered guided missile cruiser (CGN) has taken another definite step forward with the contract award of the main propulsion turbines and gears. Announcement of the contract award for the construction of the ship was made in October 1956.

The present contract includes construction of the propulsion turbines, steam separators, reduction gears, condensers and associated turbine equipment.

Twin screws will propel the ship. The cross-compound steam turbine will drive double-reduction, locked train gear sets for each shaft. The propulsion gears will be of a design which has been incorporated in five of the nation's largest attack aircraft carriers.

The saving in weight gained through the use of such gears will increase the ship's capacity for carrying more electronics and fire control equipment.

PIONEERS of Navy's future nuclear powered Fleet, *USS Seawolf*, SS(N)575, and *USS Nautilus* SS(N)571, head to sea.

STILL GOING STRONG—USS *Hancock* (CVA 19), showing effects of Japanese suicide plane, leads in donations for Navy-Marine Memorial Stadium Fund.

Stadium Fund Nears Half-Way Mark

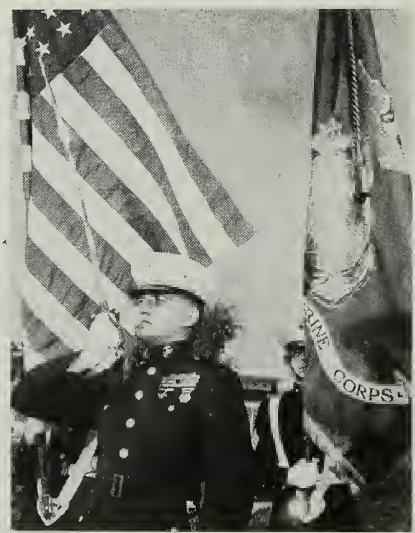
Two Fleet units—USS *Hancock* (CVA 19) and *Lake Champlain* (CVA 39)—have replaced *Bon Homme Richard* (CVA 31) as leaders in the Navy-Marine Corps Memorial Stadium Fund donations and have also replaced SubPac in largest donations per man.

Hancock of AirPac has forwarded $6500 and *Lake Champlain* of AirLant has donated $5000 to the Fund. Many other units are being heard from for the first time; others are increasing their initial contributions. A pledge of $1000 for a plaque has been received from former crew members in the name of USS *Barb* (SS 220) which accounted for more than 250,000 tons of shipping sunk and damaged during World War II. Loaned to the Italian government in 1952, *Barb* is now known as *Henrique Tazzoli.*

The total donations received as of 1 June amounted to $402,380 toward the $2,000,000 set as the goal of the Drive. These donations from ships and stations, added to the $1,000,000 set aside toward the project by the Naval Academy Athletic Association, give the fund a total of $1,400,000 of the $3,000,000 needed to build the Stadium.

Based upon the reports received, below are listed the ships and stations who are the leaders in their class as of 1 June:

USS *Hancock* (CVA19)	$6,500.00
USS *Lake Champlain* (CVA39)	5,000.00
USS *Leyte* (CVS32)	777.00
USS *Tarawa* (CVS40)	500.00
USS *Thetis Bay* (CVHA1)	1,200.00
USS *Saipan* (CVL48)	1,000.00
USS *Corregidor* (T-CVU58)	766.00
USS *Curtiss* (AV4)	180.00
USS *Floyds Bay* (AVP40)	111.00
USS *Wisconsin* (BB64)	1,748.00
USS *Iowa* (BB61)	1,180.00
USS *Des Moines* (CA134)	1,238.00
USS *Canberra* (CAG2)	1,072.00
USS *Northampton* (CLC1)	1,000.00
USS *Yellowstone* (AD27)	1,200.00
USS *Shenandoah* (AD26)	1,000.00
USS *Gatling* (DD671)	583.00
USS *Waldron* (DD699)	554.00
USS *Barry* (DD933)	500.00
USS *Everett F. Larson* (DDR830)	252.00
USS *Goodrich* (DDR831)	101.00
USS *Fletcher* (DDE445)	250.00
USS *O'Bannon* (DDE450)	207.00
USS *Spangler* (DE696)	400.00
USS *Silverstein* (DE534)	100.00
USS *Pillsbury* (DER133)	109.00
USS *Rhodes* (DER384)	103.00
USS *Maloy* (DE791)	130.00
USS *Eldorado* (AGC11)	57.00
USS *Olmsted* (APA188)	388.00
USS *Arneb* (AKA56)	107.00
USS *Altair* (AKS32)	347.00
USS *Carpellotti* (APD136)	105.00
USS *Carter Hall* (LSD3)	182.00
USS *Iron County* (LST840)	47.00
USS *LSM297*	13.00
LCU Div. 12	40.00
USS *Mauna Loa* (AE8)	88.00
USS *Aldebaran* (AF10)	201.00
USS *Antares* (AK258)	71.00
USS *Salamonie* (AO26)	1,030.00
USS *Vulcan* (AR5)	600.00
USS *Haven* (AH12)	65.00
USS *Tutuila* (ARG4)	108.00
USS *Jason* (ARH1)	50.00
USS *Glacier* (AGB4)	107.00
USS *Tanner* (AGS15)	128.00
USS *Genesee* (AOG8)	40.00
USS *Etlah* (AN79)	15.00
USS *Deliver* (ARS23)	114.00
USS *Salvager* (ARSD3)	30.00
USS *Chadron* (PC564)	30.00
USS *Rockville* (PCER851)	50.00
USS *Hornbill* (MSC(O)19)	100.00
USS *Engage* (MSO433)	90.00
USS *Cormorant* (MSC122)	63.00
MinDiv 111 (ML/MS)	200.00
USS *Samoset* (ATA190)	32.00
USS *Luiseno* (ATF156)	45.00
USS *Remora* (SS487)	211.00
USS *Grampus* (SS523)	132.00
USS *Fulton* (AS11)	176.00
USS *Greenlet* (ASR10)	120.00
USS *General W. A. Mann* (T-AP112)	375.00
USNS *LST 1072*	69.00
USNS *Gen. Daniel I. Sultan* (T-AP120)	124.00
Submarine Base New London	1,200.00
SubPac (*breakdown not received*)	9,404.00
Naval Air Test Center Patuxent	1,454.00
NAS Niagara Falls	1,200.00
U. S. Naval Training Center Bainbridge	3,616.00
Second Marine Division FMFLant	2,088.00
First Marine Division FMFPac	1,000.00
First Marine Brigade FMFPac	968.00
Hawaii Marines	1,323.00
NAS Atsugi Japan	1,163.00
Naval Radio Station, Winter Harbor, Maine	117.00
Portsmouth Naval Shipyard	838.00
Marine Corps Recruit Depot, Parris Island	525.00
U. S. Naval Net Depot, Tiburon, Calif.	240.00
Leading Air Units:	
Marine Aircraft Group 31 FMFLant	740.00
HS-8	78.00
VA-55	166.00
VAH-3	192.00
VF-153	28.00
VP-44	113.00
VW-13	403.00
VQ-2	345.00
VR-7	265.00
VU-3	145.00
AEW-11	100.00
ATG-201	216.00
FASRON-200	364.00



BIG CONTRIBUTORS—Marines from around the world have come through with gifts for Stadium Fund.

Turbo-Catapult

A revolutionary new method of launching high-speed aircraft from short airfields in less than one-fifth of their normal take-off runs has been made possible by a turbo-catapult powered by six jet engines, developing 60,000 horsepower.

The engines are arranged in a circle with the exhaust gases flowing into central launching turbines that drive a drum cable system mounted on the same drive shaft. With the engines set at a predetermined rpm, the flow gate, diverts the powerful exhaust gases into one of the launching turbines.

The drum cable system drives a shuttle guided in a track in the runway with the aircraft attached to the shuttle by means of a bridle such as those used on carriers.

Aircraft boosted by the turbo-catapult can attain flying speed long before it could be reached using only their own power.

The turbo-catapult, which is only one-fifth the weight of a comparable steam catapult, has the advantage of using readily available jet engines. Economy is derived by using jet fuel or low-grade gasoline now on hand.

It has no clutches or complicated gear boxes and is basically simple. Any aircraft fitted for carrier operation can be launched from the turbo catapult without modification.

Tops in Trampolin and Tumbling

LTJG Jeff Austin, Physical Fitness and Survival Instructor at the U.S. Naval School of Pre-Flight, Pensacola, Fla., has copped first place honors in both the tumbling and trampolin competition at the 1957 National AAU Tournament.

The 24-year old JG has completed a feat which no other American has ever accomplished—placed first in both the NAAU tumbling and trampolin events.

Victory for LTJG Austin, however, was three years in the making. He was runner-up in trampolin and third in tumbling during the 1955 and '56 national finals. This year, persistence paid off and the climax came during the National AAU Tournament at the University of Chicago.

One might say that LTJG Austin —literally and figuratively—"tumbled" into marriage since his wife, the former Susan C. Hill, was the runner-up in the 1955-56 NAAU Women's Tumbling Championships.

He Axed the Way Back to Earth

"What goes up has to come down." But, for Bill Langland, AD2, USN, it took an axe, some line, a gun barrel and a lot of fancy footwork when he encountered a nose wheel that wouldn't come down and a plane that couldn't come down.

A member of Electronic Countermeasures Squadron One, Langland is plane captain of a P4M *Mercator*. Taking off on a regularly scheduled hop, the plane seemed in good order, and, as Iwakuni faded into the background of hills and the *Mercator* leveled off at altitude, it appeared to the pilot, LCDR "Jerry" McMorrow, that everything was normal. Then Langland reported a hydraulic leak. It didn't take long to determine that the plane would have to return to base and minutes later the P4M was in the landing pattern at Iwakuni.

W. R. Langland, AD2, and 'tools.'

An attempt was made to lower the landing gear in the usual manner. It didn't work.

The emergency method was used and the main gear came down—but the nose gear stayed up. By this time Langland was peering through the nosewheel observation window, trying to figure out his next move, and LCDR McMorrow had set the plane in an easy turn around the field.

However, this wasn't to be an easy affair. After all the "usual" emergency methods had been tried, Langland got an axe. He chopped the observation window out, reached down and tried to force a locking device which would permit the nose gear to lower. It wouldn't force, so Langland got a 50 caliber gun barrel from the deck turret and tried using it as a wedge, which released the nose gear to a partially extended position. Then, he got some line which, as he said later, he carried "for no particular reason—I just thought I might need it sometime."

He reached down into the nosewheel well and managed to wrap the line around the partially extended strut while he battled a strong wind current. The plane captain and his righthand man, E. S. Renfro, AT3, USN, tugged at the line in a vain attempt to pull the strut into position. After that a jury rig was devised, with the gun barrel through the loops of line for additional leverage. Still, no luck. Even with five of the crew heaving on the line while Langland tried to wedge the strut into position with the gun barrel, the strut held fast.

About this time a choice had to be made between attempting a landing without the nose gear while there was still daylight, or staying airborne as it got dark and continuing to work on the gear in the hope it would fully extend. Pilot McMorrow decided to stay airborne.

Langland's next move was with the axe. He chopped a hole in the deck immediately above the nose wheel, clambered down into the hole and bounced up and down on the tire as the crew tugged away at the line. The stubborn wheel finally budged about four inches.

Using the axe again, he chopped a hole in the emergency hydraulic reservoir and dumped his last gallon of fluid into the system. The extra pressure produced by this, plus the five men tugging on the line and Langland bouncing up and down on the tire, proved too much for the reluctant nose wheel and down it came at last.

Langland then placed a locking pin in the fully extended strut, tucked his axe, line and gun barrel into a corner and prepared the plane for landing. LCDR McMorrow brought the *Mercator* in "real easy," the strut held and plane captain Langland relaxed at last.

SERVICESCOPE

Brief news items about other branches of the armed services.

★ ★ ★

A DEVICE THAT LOCATES Arctic crevasses—camouflaged "canyons" which can consume men, equipment and supplies—has been developed by Army Engineers. The unit creates an electromagnetic field which is distorted by the presence of a crevasse.

Basically, the device consists of four "electrodes" placed at approximately 20-foot intervals. Its motive power is a Weasel, an over-snow vehicle that carries special electronic equipment, moves three electrodes in the form of disk-shaped sleds about four square feet in size, and acts as an electrode itself.

The search head is pushed ahead of the Weasel. The other sleds are towed behind. The rearmost sleds combine to create the electromagnetic field. Power is provided by a generator.

In operation, the driver keeps a watchful eye on a special recorder as the Weasel moves over the ice. So long as the meter stays steady, it means the terrain is uniform. When the search head reaches a crevasse, the difference in the air in the crevasse and the surrounding area causes a noticeable change in the recording. The alarm is distinct when the Weasel is about 10 feet from the danger point.

Since the vehicle travels only about three-to-five miles an hour, this is sufficient warning.

The detector located all known crevasses and some new ones during tests covering more than 100 miles of the Greenland Ice Cap last summer. A detector made from Army Engineer drawings has also been used by Task Force 43 operating in the Antarctic.

★ ★ ★

THE GLOW OF THE NIGHT-TIME sky does not entirely depend on the moon. Carrying on the rocket experiments at Alamagordo, N. M., an Air Force research team has verified the theory that the light of the night sky is due to a photochemical process involving sodium vapor in the upper air.

Scientists have long known that moonlight and starlight alone could account for only a fraction of the light reaching the earth from the sky at night. Sensitive instruments could detect the night-time glow characteristic of the sodium element. A recent rocket experiment at the New Mexico site has now revealed data about the cause of the sodium glow.

Previous rocket flights furnished studies of sodium behavior at twilight when the sodium vapor, ejected from a rocket at high altitudes, was still in the direct rays of the sun. The New Mexico flight, however, was a true night-time sodium emission experiment, the first of its kind.

When the rocket reached an altitude of 30 miles, sodium vapor release was begun. This continued to the peak of the trajectory at 85 miles and back down again to 45 miles. Approximately four pounds of sodium vapor had been distributed along the rocket's trajectory.

A yellow trail clearly visible to the eye was formed in the region from 30 to 60 miles in both the upward and downward portions of the rocket trajectory. Above 60 miles, however, there was no visual effect produced by the sodium.

The visible portions of the trail were photographed by special cameras. These cameras allow for the determination of the altitude and motion of the trail.

The rate at which the glow faded, the intensity at various altitudes, and the sharp upper limit of the visible glow will furnish Air Force scientists information which may help them to determine the exact processes which take place in the upper air.

★ ★ ★

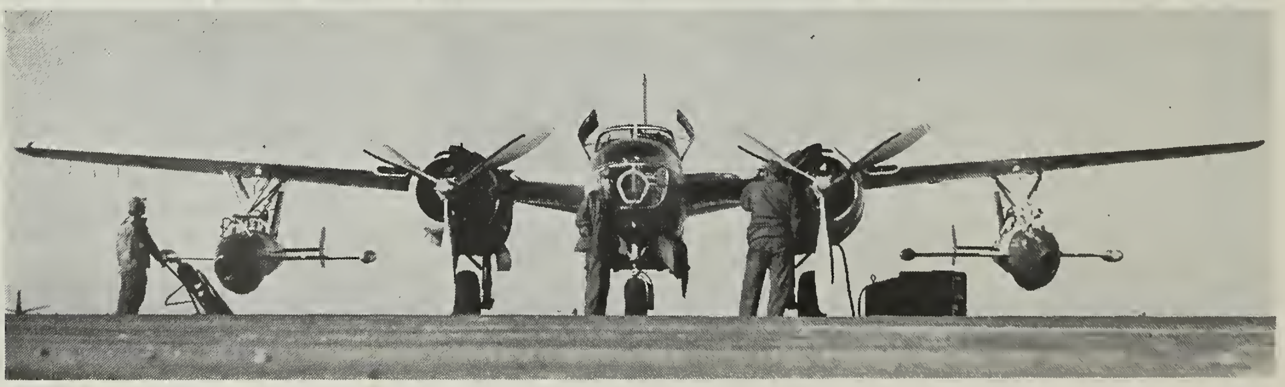
AN EMERGENCY PARTIAL PRESSURE SUIT for high-altitude flight has been announced by the Air Force.

The new suit, which comes in two versions, already has been used successfully for several record flights. It was used by Air Force pilots flying the X-2 rocket research aircraft; it was used by a naval officer, LCDR M. Lee Lewis, USN, and a meteorologist for the Office of Naval Research, Mr. M. D. Ross, who set a balloon altitude record of 75,000 feet (ALL HANDS, January 1957, page 17), and by another Air Force officer who ascended to 198,770 feet in an altitude chamber test.

The suit gains its comfort and mobility from an improved design. With only 12 standard sizes almost any man can be fitted perfectly. This is accomplished by two sets of lacings down the front, which can be tightened or loosened to mold the suit to the contours of the body. The result is a garment that permits almost normal breathing.

In the assembly, which includes a pressurized helmet, all electrical leads are carried in one small hose. One version, the MC-3, is designed for bomber crewmen, while the MC-4 has a built-in anti-gravity suit for fighter pilots. Both also include pressurized gloves.

FIRE POWER—Target drones like *Firebee* KDA-1, attached to mother plane are used to keep pilot efficiency high.



The air force has worked out designs for a new coupling device that makes refueling in flight faster and safer.

This new coupler increases the rate of fuel flow and reduces the amount of fuel spilled during aeriel refueling. It is the first standardized Air Force refueling coupler and will be used with future tactical fighters having the probe-drogue refueling system.

With the coupler it is possible to increase the maximum rate of fuel flow from 300 to 1200 gallons per minute. As a result, probe-drogue refueling time has been cut about 75 per cent.

Aerial refueling is made safer by the reduced amount of fuel spilled. The coupler spills only about 25 cubic centimeters of fuel during normal operation as compared to some 400 cubic centimeters spilled by earlier devices.

★ ★ ★

A giant solar furnace that can concentrate the sun's rays to produce temperatures comparable to those of an atomic explosion is to be erected at Natick, Mass., by the Army.

Designed to test materials intended for protection against the thermal effects of nuclear weapons, the furnace is expected to reduce the time and cost of development.

A solar furnace collects the sun's rays and directs them into a small target area just as a magnifying glass produces a hot-point focus.

Present standard sources of intense heat, such as high-current electric arcs, gas-fired panels, and burning magnesium are not adequate for present day experiments.

Consisting of four elements occupying an area 125 feet by 40 feet, the sun furnace has an automatic positioning device keeping the system aimed directly at the sun at all times.

At one end of the assembly is a tremendous mirror which receives the sun's rays and reflects them to another bank of mirrors.

The rays are channeled into a chamber in a four-inch beam where articles can be exposed to the heat.

Transparent rubber is being tested by the Air Force as a way to beat the heat on airplane windshields.

The rubber will be used as an interlayer in windshield glass of new supersonic aircraft. With this new material airplane windshields will be able to withstand twice as much heat from air friction at high speeds.

Since airplanes have surpassed the speed of sound, surface temperatures have greatly increased. Frictional heat can reach such intensity that the flexible, transparent plastic now used as a windshield layer softens and begins to lose strength. When its strength is gone, the interlayer is unable to prevent the glass from shattering if cracked.

The new rubber interlayer retains adequate strength up to 350 degrees Fahrenheit as compared to the 180-degree Fahrenheit limit on present plastic interlayers.

At the other end of the temperature scale, the new interlayer retains its shatter-resistance properties at the sub-zero temperature of 65 degrees Fahrenheit, whereas the present interlayer becomes brittle and possesses no shatter resistance at that temperature.

A DECIDING POINT—*Lacrosse*, Army's surface-to-surface missile, is designed for support, accuracy and mobility.

The rubber interlayer is a bit cloudier than the plastic material and up to 160 degrees Fahrenheit has less shatter-resistance. However, strength of the plastic interlayer falls off so sharply that at 200 degrees Fahrenheit the rubber interlayer is already more than twice as effective.

★ ★ ★

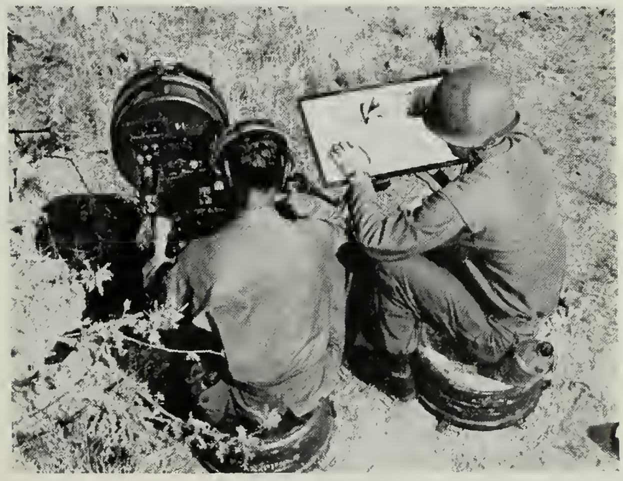
The Army Transportation Corps is experimenting with an outsized rubber bag known as a "rolling fluid transporter" for moving bulk liquids and fuels.

The transporter consists of a series of collapsible fabric reinforced rubber bags centered on axles connected with a towing yoke. Several can be towed with no loss of cargo space of the truck body, or need for heavy equipment to lift them aboard.

When towed behind vehicles, the transporters present no greater problem of maneuverability than those encountered in handling conventional auto trailers. Although a transporter has a capacity of 500 gallons and weighs 4100 pounds fully loaded, six can be towed on level ground by a conventional jeep.

Eleven were used last summer at Thule Air Base, Greenland, moving fuel 1100 miles over snow and contributed greatly to the Arctic transportation operations.

NEW TYPE LOCATOR—Army's new radar mortar locator uses beam technique to spot enemy mortar placement.



THE WORD

Frank, Authentic Advance Information On Policy—Straight From Headquarters

• **NEW OFFICER CAREER SECTION**—A Reserve Officer Career Section (Pers Bb1f formerly B15r) has been established in the Aviation Liaison Branch of this Bureau.

The new section has been set up to provide information concerning increased opportunities for Naval Reserve officers in grades up through lieutenant, with date of rank for lieutenant of not earlier than 1 Jul 1953, to return to or remain on active duty. Opportunities include improved promotion plans, special training and indefinite retention on active duty.

The section will provide current, factual information on every facet of these subjects to commands, groups and individual officers; and will encourage and assist those interested in returning to or remaining on active duty.

Aviators interested in this program may write to the Chief of Naval Personnel (Attn. Pers Bb1f).

• **OFF TO COLLEGE SOONER**—You may now be separated from the Navy up to three months early to resume or begin your college education. Earlier, 30 days was the maximum.

There are, however, certain requirements which govern your chances for an early separation. The first, which should be submitted in writing by either the applicant or a college or university official, is proof of undue handicap if you are unable to commence or continue your schooling until after the date of expiration of your active service.

For instance, if you are scheduled to be separated in November 1957 and the school to which you apply for entrance could not then accept you until September 1958, an "undue handicap" is recognized.

The school you plan to attend must be a recognized, accredited institution of higher education at which your course of instruction will lead to a baccalaureate degree or higher (i.e. a Master's degree or Ph.D.). The Chief of Naval Personnel will determine if the selected college or university meets these standards. Trade schools, night schools, or part-time schools are not included in the accredited category.

Your conduct and performance of duty while in the Navy must have been "sufficiently meritorious to warrant special consideration."

Requests should be made to the Chief of Naval Personnel via your commanding officer not more than three months before the date on which you request separation. You will not be separated more than 10 days before classes at your college or university convene.

Details may be found in BuPers Inst. 1910.12A. Provisions of the instruction are only applicable to enlisted personnel.

• **EMERGENCY SERVICE RATINGS**—Six new selective emergency service ratings have been activated for E-4s. They are: Fire Control Technician G (Missile Guidance Systems), Aviation Electronics Technician R (Radar), Aviation Electronics Technician S (ASW), Aviation Electronics Technician N (Communications and Navigation Equipment), Tradevman R (Repairman) and Tradevman I (Instructor).

Complete information may be found in Change No. 3 to BuPers Inst. 1223.1.

• **OPEN MESSES OPENED FOR E-5s and E-6s**—Shore commands may now establish open messes for petty officers in pay grades E-5 and E-6. This will give the top three enlisted pay grades club privileges comparable to those of noncommissioned officers of the other services.

Where possible, these messes will be quartered in separate buildings or in portions of EM Club buildings restricted for their exclusive use. Appropriated funds for construction of new mess buildings or for alterations to existing EM Clubs may be used according to regulations.

Commanding officers may submit requests to the Chief of Naval Personnel for approval of expenditure of local recreation funds in excess of $5000 where appropriated funds are not available.

The Board of Administrators of the BuPers Central Recreation Fund will consider requests for loans, when funds are not available from local or command recreation funds. However, don't let your dreams of future glory run away with you. Present demands upon the BuPers Central Recreation Fund are so great as to make it difficult to authorize grants or loans for construction of new buildings or large-scale alterations to existing buildings.

The official details may be found in BuPers Notice 1746 of 17 Jan 1957, SecNav Inst. 7310.1A, and the *Manual for Chief Petty Officers Messes and Enlisted Men's Clubs Ashore,* 1955 (NavPers 15800).

• **ENLISTED PROMOTIONS HIGH**—The advancement of more than 58,200 enlisted men has been authorized by the Chief of Naval Personnel as a result of the February 1957 examinations. An additional 5819 non-rated men have been designated strikers.

Here's a breakdown of the over-all enlisted promotion picture: CPO—5745; PO1—4785; PO2—20795; PO3—26900.

All PO1, PO2 and PO3 promotions and striker designations will be effective 16 June. The new chiefs will get their hats in five groups, with the first being rated on 16 June.

Additional E-4 promotions resulting from 2 May exams are forthcoming for those in 38 "critical" ratings. It is planned to rate all who pass.

• **LIABILITY INSURANCE**—All naval personnel must have adequate automobile liability insurance before they can be issued a permanent permit to drive their cars on any naval installation. This requirement was made a part of the off-duty traffic safety program for all service members who operate their own automobiles.

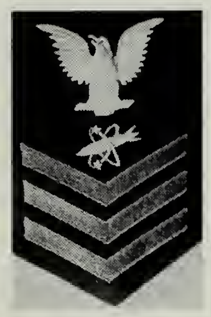
Certain states now require the owner of a motor vehicle to have public liability insurance coverage before he is allowed to register his car; other states require a driver to prove he is covered by liability insurance or show other evidence of financial responsibility if he is involved in an accident.

If you are unable to obtain adequate liability coverage from a commercial agency you may take out an "assigned risk" policy from the state in which you reside and in which you make application to your State Insurance commissioner.

• UNIFORM CHANGES — Five further uniform changes have been approved by the Secretary of the Navy.

Authorization to wear *ship name sleeve marks* has been extended so that enlisted personnel below the grade of CPO may wear the identifying marks of their units while serving with aircraft squadrons.

The specialty mark for the new general rating of Nuclear Weapons Man will be a falling bomb with two electrons revolving around it. The new specialty qualification of deep sea diver will have a distinguishing mark composed of a diving helmet and breastplate with the letter D centered in the breastplate.



Nuclear Weapons Man

Also, the U. S. Navy Band has been authorized to wear a new parade uniform which consists essentially of: a gold-colored, single breasted coat with standing collar, waist belt and shoulder marks; dark blue trousers with gold stripe and a combination cap with gold-colored band and black, patent leather chin strap.

Another change, of interest to officers, provides that the white scarf, formerly an optional article of uniform, is now required. Also, officers may wear academic regalia above the BA and BS degree level with the naval uniform upon occasions of academic ceremony. This authorization does not apply at USNA graduation exercises.

• NEW OFFICER DATA CARD—All commissioned officers, warrant officers and enlisted aviation pilots will be required to submit a revised Officer History Card (NavPers 765) and Officer Preference and History Supplement Card (NavPers 765A) on 1 August. Distribution will begin in July.

The History Card will be submitted once only. The Preference and Supplement Card will be submitted periodically and when major changes occur.

BuPers Inst. 1301.25, which provides detailed instructions for the preparation and initial submission of the cards, also strongly emphasizes the importance of the new cards. It reminds all officers that qualifications, requirements and other data are used constantly to determine officers' future duty assignments. If your data card is not properly filled out and up to date, it is difficult for the detail officer to assign you properly.

• RIGHTS AND BENEFITS ISSUE — The Chief of Naval personnel has ordered reprint of the entire contents of the 80-page May 1957 issue of ALL HANDS to be distributed to every man and woman on active duty.

It will be issued in the same format, but will be titled *Rights and Benefits of Navymen and Their Dependents* (NavPers 15885-A). You may expect to receive your personal copy some time after mid-August.

• OFFICER FACT BOOK — Information concerning the Navy as a career for young officers has recently been made available in the *Officer Fact Book* (NavPers 15898).

Distributed to all commands and senior officers for their use in counseling, the book provides factual information on the Navy as a profession and a way of life for all Regulars and Reserves, no matter what their designator.

Included among the subjects discussed are: Career, retention and recall opportunities; active duty officer programs; promotional opportunities; educational opportunities; assignment and rotation patterns; Navy pay and allowances; and benefits.

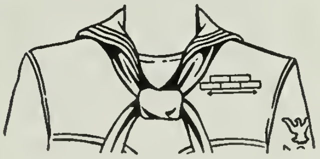
BuPers Notice 1040 of 9 Apr 1957, reminds each command that it has a continuing responsibility for insuring that each officer is aware of the opportunities, responsibilities and rewards offered by continuous active duty. The book is issued in loose-leaf form, to permit revision each year.

• SEA DUTY FOR WAVE HMs—There are plenty of sea duty billets available for women Hospital Corpsmen. The eligibility list for duty aboard dependent-carrying MSTS transports is depleted at present and, if you meet the qualifications to be found in BuPers Inst. 1306.10B, you may expect almost immediate assignment. Submit your letter request to the Chief of Naval Personnel (Attn: Pers B21222).

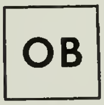
QUIZ AWEIGH

This month's centerspread deals with the uniform you wear. Here are a few questions—check yourself and see if you rate a 4.0 at personal inspection.

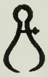
1. Ribbons may be sewed on uniforms or arranged on a bar or bars to be attached to the uniform as illustrated above. Men should wear them so the lower edge of the bottom row is approximatly (a) ½ inch above the left breast pocket (b) ¼ inch above the left breast pocket (c) even with the top of the left breast pocket.



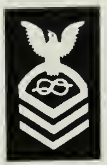
2. A PO1 with 18 years' continuous active service who did not earn a good conduct medal during his first enlistment but since has 12 years of continuous good conduct, should wear on his dress blue uniform (a) four red hash marks (b) three gold hash marks (c) four gold hash marks.



A



B



C

3. The above illustration shows three different sleeve markings worn by enlisted personnel. Figure "A" is a distinguishing mark. It is worn (a) on the left breast (b) midway between shoulder and elbow on right sleeve (c) on the left sleeve, one inch from the shoulder seam.

4. Figure "B" is a specialty mark which is worn by rated personnel and designated strikers. It represents (a) metalsmith (b) draftsman (c) instrumentman.

5. The rating badge in Figure "C" represents a/an (a) Apprentice Chief Petty Officer (b) Chief Assault Boat Coxswain (c) Chief Specialist.

6. The wearing of the naval uniform should be a matter of personal pride to all naval personnel. Your appearance should reflect credit upon yourself, the naval service and the country. Therefore, you should (a) wear your hat or cap squared at all times (b) keep your hair neatly and closely trimmed and no more than three inches long (c) not have pencils, pens, watch chains, pins, jewelry, wallets, combs, cigarettes, cigars or similar items worn or carried exposed upon the uniform.

(ANSWERS CAN BE FOUND ON P. 46)

THE BULLETIN BOARD

Latest Navy Uniform Changes Approved by SecNav, Include New Insignia, Medals

Ten recommended changes to the U. S. Navy Uniform Regulations submitted by the Permanent Uniform Board have been approved by the Secretary of the Navy.

The changes include approval of additional officers to wear the musician's lyre, a new boilermaker insigne, wearing of large medals by enlisted personnel, authorization to wear the Merchant Marine World War II Victory Medal and adoption of a smaller officer and chief petty officer tie clasp.

The insigne for the newly established boilermaker rating will be similar to the present boilerman specialty mark, but will have a wrench superimposed.

Wearing of large medals by enlisted personnel on dress blue and white uniforms upon the same occasions and in the same manner as now applies for officers will be required on the following dates: chief petty officers, 1 Jul 1957; first class petty officers, 1 Jan 1958; second class petty officers, 1 Jul 1958; third class petty officers, 1 Jan 1959; and nonrated personnel, 1 Jul 1959.

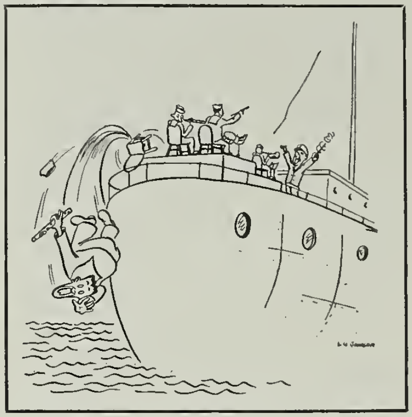
Personnel appointed to commissioned grade for temporary service in the Navy Music Organization and Warrant Officer Bandmasters are now authorized to wear the musician's lyre. Earlier, only leaders and assistant leaders of the Navy Band and Naval Academy band and the officer-in-charge of the School of Music could wear the lyre.

Added to the list of awards authorized for wear on naval uniforms will be the Merchant Marine World War II Victory Medal, which will take precedence after the Merchant Marine War Zone Bars.

A gold, undecorated bar style tie clasp, long enough to cover the tie, will replace the present clasp.

Knee-length socks were approved for wear with tropical khaki and tropical white uniforms for male officers and chief petty officers.

All-Navy Cartoon Contest
Lindy U. Johnson, YN1, USN



"Ok—Here we go—and let's have a little more oomph from the piccolo!"

The U. S. Navy Band (based in Washington, D.C.) will now have a winter and summer concert uniform consisting basically of a blue or white jacket, blue trousers, cummerbund, white shirt and black bow tie to replace the present full dress uniform.

Personnel attached to outstanding Naval Reserve units which have won National Trophies will be authorized to wear the Navy "E" during the year following annual competition.

A specialty mark consisting of the letter "A" centered in a diamond for the exclusive emergency service rating of Aircraft Carburetor Mechanic has been approved.

The dungaree jacket will no longer be authorized after 1 Jul 1958.

All-Navy Cartoon Contest
Theo. H. Tennant, YNC, USN

"I wonder if someone would check my pay accounts? I've been informed that I was three dollars short last pay day!"

Philippine Presidential Unit Citation May Now Be Worn, Eligibility Requirements Set Up

Final authority has been granted in BuPers Inst. 1650.7 for certain members and former members of the Navy to accept and wear the Philippine Republic Presidential Unit Citation Badge. The badge consists of a ribbon only.

Units cited by the President of the Philippine Republic were those participating in combat operations in the Philippine Area during World War II and those engaged in the defense of the Philippines between 7 Dec 1941 and 5 May 1942; those units which participated in the liberation campaign during 1944 and 1945; and certain submarines that had maintained physical contact with guerrilla forces during the Japanese occupation of the Philippine Islands.

The ribbon may be purchased at most uniform shops. It will not be stocked or furnished by the Navy Department. Additional distinguishing devices are not authorized for service in two or more cited units.

In precedence, the Philippine Republic PUC ribbon will be worn after United States small-arms ribbons and before the Korean Presidential Unit Citation Badge.

This award was officially tendered by the Philippine Government in 1948. However, authority to wear the ribbon at that time could not be granted because the wording in the accompanying citation implied that it had been tendered on the basis of a personal decoration to individuals concerned. A recent review of this situation resulted in a reversal of the opinion, permitting the Secretary of the Navy to authorize wearing of the ribbon.

Verification of eligibility for USN and USNR personnel to wear the ribbon can be made through service record data, orders, or by a sworn affidavit.

If you are an officer and eligible for the award, your commanding officer will issue a letter authorizing you to purchase and wear it. A copy of this letter should be sent to the

Chief of Naval Personnel (Attn: Pers E 2) for inclusion in your jacket. If you are an enlisted man, after being informed of your eligibility and an entry has been made in your record, you may purchase the ribbon.

Marine Corps personnel may go through the same steps as USN enlisted personnel in addition to complying with paragraphs 4015 and 5012 of PRAM.

Those qualifying for the ribbon are personnel who were attached to ships and units entitled to engagement star P3, as listed in NavPers 15790, where eligibility results from combat operations in the area of the Philippine Islands, plus all ships and units entitled to any one of the engagement stars P31, P32, P39, and P41, as listed in the same publication.

A compilation of submarines and the period for which they were cited for the award is listed below.

USS *Angler* (SS 240)	20 to 21 March 1944
USS *Blackfin* (SS 322)	14 to 18 November 1944
USS *Bowfin* (SS 287)	2 to 30 September 1943
USS *Cero* (SS 225)	17 October to 2 November 1944
USS *Crevalle* (SS 291)	7 to 19 May 1944
USS *Gar* (SS 206)	13 November to 11 December 1944
USS *Grayling* (SS 209)	31 July to 23 August 1943
USS *Gudgeon* (SS 211)	1 January to 30 April 1943
USS *Gunnel* (SS 253)	2 December 1944
USS *Hake* (SS 256)	5 December 1944
USS *Narwhal* (SS 167)	25 November 1943 to 2 November 1944
USS *Nautilus* (SS 168)	29 May 1944 to 23 January 1945
USS *Ray* (SS 271)	26 October to 1 November 1944
USS *Redfin* (SS 272)	26 May to 31 August 1944
USS *Seawolf* (SS 197)	1 August to 6 October 1944
USS *Stingray* (SS 186)	16 August 1944 to 1 January 1945
USS *Tambor* (SS 198)	18 February to 5 March 1943
USS *Trout* (SS 202)	12 July 1943

This Philippine citation is a red, white, and blue ribbon in wide vertical stripes framed by a gold box.

HOW DID IT START

Little Red School House — Overseas

A little over six years ago the doors of a Navy dependents school in Naples, Italy, were opened for the first time. The original student body consisted of 90 children — and, recalls one of the original faculty, "We had pupils, teachers and desks, but nothing else."

Since that time the school has grown to be the largest Navy overseas dependents school in the world. Housed in a modern brown-stone building overlooking the Bay of Naples, it now has 42 classrooms and a large cafeteria which doubles as an auditorium and teen-agers' club. It also has a year-round program of sports and recreation which includes almost everything from horseback riding to boxing.

But, classrooms, extracurricular activities and the high academic standards it maintains aren't all this school has to offer, for it's also giving its students some first-rate lessons in international harmony and understanding.

At latest count there were 1168 youngsters enrolled in the school's elementary, junior high and senior high classes. Most of these boys and girls are Americans, but 32 of them are children of Greek, Turkish and British personnel stationed at NATO's Allied Forces Southern Europe headquarters in Naples. A number of Italian children have also attended the school. (Tuition for the foreign students is paid by their parents or governments.)

It is impossible to distinguish the foreign youngsters from their American classmates. They sport saddle shoes, bobby sox, bright plaid shirts and crew cuts, and speak Americanese. They look like the kids you'd see at a school back in the States. A boy from Athens hurries down the corridor, his red lunch box in hand with Davy Crockett's picture in full display. A Turkish teen-ager chats with her American girl friends about tonight's movie. Yet, less than a year ago many of these children knew little or no English.

Besides what they learn about foreign countries from their classmates, the American kids get plenty of first-hand knowledge from the field trips which supplement classroom instruction. The Naples area abounds in antiquities of the Roman civilizations, and students make regular trips to Pompeii and Herculaneum, both covered by the eruption of Mount Vesuvius in 79 A. D.; the Royal Palace at Caserta; the world-famous San Carlo opera house; Cumae, where Greek civilization penetrated Italy; and Solfatara, with its pools of hot water bubbling from the crater of a dormant volcano. Grade-school students watch great freighters from ports of the world being loaded along the Naples waterfront. Some visit the air terminal at Capodichino and other groups tour places like the Naples aquarium and the National Museum.

Almost ever since it opened, the school has been known as the Forrest Sherman school, in honor of the Chief of Naval Operations who died in Naples on 22 Jul 1951. However, it wasn't until this year that the name became official. Since Admiral Sherman strongly supported establishment of the school and was a great advocate of international harmony, the name couldn't have been more appropriate.

Correspondence Course in Aviation Medicine Practice

The correspondence course ***Aviation Medicine Practice*** (NavPers 10912-A) has been completely revised and is now available for enrollment. It replaces the earlier NavPers 10912-A.

Presented in six assignments, the new course is evaluated at 18 points credit for Naval Reserve personnel.

The course covers physiological stresses and requirements; special medical problems in flight; flyers' equipment; physical and psychological standards in personnel selection and placement; aviation dentistry, and air evacuation.

Applications should be submitted on form NavPers 992 (Rev 2-56 or later) with appropriate change in the "To" line, forwarded via official channels to the Commanding Officer, U. S. Naval Medical School, National Naval Medical Center, Bethesda 14, Md.

TABLE I

NUMBER WHO PASSED AND ADVANCEMENT QUOTAS FOR EACH RATE AS RESULT OF FEBRUARY 1957 EXAMINATIONS

RATE	E-4		E-5		E-6		E-7	
	No. who passed	No. who may advance	No. who passed	No. who may advance	No. who passed	No. who may advance	No. who passed	No. who may advance
BM	2470	250	1500	45	1536	50	995	30
QM	316	316	259	259	96	96	237	37
SM	280	280	199	199	65	65	119	36
RD	680	680	665	665	195	195	132	132
SO	233	233	359	359	124	124	86	86
TM	220	220	210	210	189	45	258	35
GM	1454	915	914	325	810	25	658	36
GS	31	31	42	42	25	25	23	8
FT	—	—	652	652	238	120	319	163
FTM	161	161	—	—	—	—	—	—
FTU	7	7	—	—	—	—	—	—
FTA	314	314	—	—	—	—	—	—
FTL	45	45	—	—	—	—	—	—
FTE	5	5	—	—	—	—	—	—
MN	107	12	124	14	60	7	26	8
ET	—	—	684	684	303	227	385	100
ETN	232	232	—	—	—	—	—	—
ETR	258	258	—	—	—	—	—	—
ETS	70	70	—	—	—	—	—	—
IM	43	25	32	32	15	2	12	7
OM	18	18	19	19	10	10	17	2
TE	410	410	355	355	133	133	60	47
RM	704	704	679	679	168	168	322	322
CT	434	434	572	572	167	167	182	182
YN	1541	1541	1087	1087	460	135	461	336
PN	1485	600	406	406	172	172	133	105
MA	120	120	61	61	50	5	47	35
SK	1277	1277	713	713	263	165	352	269
DK	319	319	195	195	60	20	83	26
CS	1048	450	1088	35	1201	35	794	308
SH	1131	125	628	140	433	43	259	111
JO	151	70	31	31	16	16	10	10
LI	122	13	72	30	35	2	22	3
DM	126	102	38	38	15	15	14	14
MU	166	166	129	129	41	41	41	27
MM	1707	1707	1450	1450	409	409	510	412
EN	1516	1516	990	990	577	162	750	176
MR	344	344	222	222	67	67	57	57
BT	1380	1380	944	944	228	228	276	276
EM	1186	1186	1068	1068	331	331	350	350
IC	322	322	355	355	118	118	50	50
ME	571	571	303	303	233	7	290	76
FP	743	655	486	486	162	81	141	141
DC	511	356	308	308	248	7	232	55
PM	47	28	14	14	6	6	4	2
ML	34	10	27	27	14	4	8	1
SV	76	30	21	21	7	7	2	2
CE	100	100	80	80	22	22	16	16
CD	491	57	260	115	148	16	68	68
CM	289	79	124	75	54	5	43	10
BU	319	319	199	199	89	89	35	35
SW	75	75	56	56	24	5	14	10
UT	81	81	60	60	23	23	10	10
AD	—	—	1007	1007	1323	40	1372	41
ADR	1586	1586	—	—	—	—	—	—
ADJ	794	794	—	—	—	—	—	—
ADP	1	1	—	—	—	—	—	—
AT	922	922	751	751	324	324	250	218
AO	—	—	544	460	297	10	365	15
AOT	39	16	—	—	—	—	—	—
AOU	772	369	—	—	—	—	—	—

Check These Tables

Opportunity has gone and come again and, first thing you know, it will be time to consider the possibilities of further advancement in rating.

If you are considering your future in the Navy you might as well make up your mind right now that you'll never become a millionaire unless you manage to get on a quiz program. However, if you're looking for a good, solid career in a responsible profession, the Navy is as good a bet as any. There's always room at the top for a good man.

Here are the hard facts and figures to prove our point.

In Table I you'll find the actual numbers of Navymen, by rate and pay grade, who passed the examinations held in February 1957 and the number who were included in the quota for advancement to each rate on a service-wide basis. You'll find the totals impressive. For example, 39,067 passed the E-4 exam and 26,900 were advanced; 26,393 passed the E-5 exam and 20,795 moved up one step; for the E-6 grade of the 14,137 who passed 4785 were advanced; of the 13,769 who passed the E-7 exam, almost half, or 5745, went shopping for a new uniform and hat.

Tables II and III give estimates of the anticipated results of the August 1957 exams (see page 39-40 for details). These estimates are really shrewd guesses, based on available statistics, study of past performances and a considered estimate of all the variables which might affect the number of men who can be included in the advancement quota. You should do half so well at Pimlico.

Bear in mind, however, that the information contained in Tables II and III is only an estimate. It is subject to change as circumstances may require, but it will give you as good an indication of your opportunities and the amount of competition as it is possible to provide at this time.

If you give Table III a little thought, you'll come to the conclusion that, in general, advancement opportunities are pretty good. You'll find that, although there is some decrease in advancement opportunities in some rates, there are 29 E-4, 30 E-5 and 26 E-6 rates in which it is expected that all or nearly all who

Advancement Odds

pass the examination will be advanced.

Take a good hard look, for example, at the advancement opportunities in the QM, SM, RD, SO, RM, CT, MM, IC, CE, UT, AT, AQ, AC, AE and AM ratings. Advancements to those rates where there are no limiting quotas will be determined strictly upon your own merits. Pass the exam, and you're in. If you're not in those ratings, things will be a little tougher. You'll have competition for your higher billet and may the best man win.

Here Are Three New Enlisted Correspondence Courses

Three more new Enlisted Correspondence Courses are available.

Enlisted Correspondence Courses will be administered (with certain minor exceptions) by your local command instead of by the Correspondence Course Center.

If you are on active duty, your division officer will advise you whether the course for which you have applied is suitable to your rate and to the training program you are following. If it is, he will see that your application (NavPers 231) is forwarded to the Correspondence Course Center, which will supply the course materials to your command for administration.

If you are a Reservist on inactive duty, your courses will be administered by the Correspondence Course Center. Use application form NavPers 580.

The first two courses are: ***Driver, Chief*** (NavPers 91576-1) which may be retaken for repeat Naval Reserve retirement credit, and ***Aviation Ordnanceman 2***, Vol. 2 (NavPers 91665).

A new correspondence course, ***Chief Storekeeper***, in seven assignments, is now available to all enlisted personnel in the SK rating.

Chief Storekeeper (NavPers 91433-1) is evaluated at 21 retirement and promotion points. It may be retaken by Naval Reservists on inactive duty for repeat credit.

These two courses have been discontinued: ***Quartermaster 3***, Vol. 2, (NavPers 91285-1) and ***Quartermaster 2***, Vol. 2, (NavPers 91287-1).

TABLE I (cont.)

NUMBER WHO PASSED AND ADVANCEMENT QUOTAS FOR EACH RATE AS RESULT OF FEBRUARY 1957 EXAMINATIONS

RATE	No. who passed	No. who may advance	No. who passed	No. who may advance	No. who passed	No. who may advance	No. who passed	No. who may advance
	E-4		E-5		E-6		E-7	
AQ	—	—	12	12	18	18	111	111
AQF	25	25	—	—	—	—	—	—
AQB	14	14	—	—	—	—	—	—
GF	31	31	3	3	39	4	50	4
AC	—	—	158	158	59	59	100	100
ACR	16	16	—	—	—	—	—	—
ACT	157	157	—	—	—	—	—	—
ACW	89	89	—	—	—	—	—	—
AB	—	—	587	300	175	5	125	125
ABU	1153	43	—	—	—	—	—	—
ABG	410	7	—	—	—	—	—	—
AE	—	—	427	427	125	125	201	201
AEM	565	565	—	—	—	—	—	—
AEI	87	87	—	—	—	—	—	—
AM	—	—	639	639	330	234	425	356
AMS	885	885	—	—	—	—	—	—
AMH	430	430	—	—	—	—	—	—
PR	—	—	50	50	366	235	67	67
PRM	86	86	—	—	—	—	—	—
PRS	50	50	—	—	—	—	—	—
AG	146	146	220	220	59	59	61	61
TD	103	103	209	209	53	53	61	19
AK	857	635	291	291	105	37	107	66
PH	—	—	279	279	86	35	91	67
PHA	136	90	—	—	—	—	—	—
PHG	381	230	—	—	—	—	—	—
HM	2388	265	1805	1020	822	25	844	26
DT	362	40	186	186	84	8	125	21
SD	1399	45	1127	34	646	19	511	25
TOTALS	39067	26900	26393	20795	14137	4785	13769	5745

TABLE II

ESTIMATES ON NUMBERS WHO WILL PARTICIPATE AND NUMBERS WHO WILL PASS AUGUST 1957 EXAMINATIONS

Rating	To Pay Grade E-4		To Pay Grade E-5		To Pay Grade E-6	
	Take Exam	Will Pass	Take Exam	Will Pass	Take Exam	Will Pass
BM	4050	2500	3000	1500	3665	1540
QM	580	360	520	260	225	95
SM	475	300	400	200	165	70
RD	1130	700	1340	670	535	225
SO	420	260	720	360	295	125
TM	305	190	420	210	450	190
GM	2380	1475	1770	885	1965	825
GS	55	35	90	45	50	20
FT	—	—	1300	650	570	240
FTG	25	15	—	—	—	—
FTM	210	130	—	—	—	—
FTU	385	240	—	—	—	—
FTA	310	190	—	—	—	—
FTL	100	60	—	—	—	—
FTE	100	60	—	—	—	—
MN	185	115	250	125	145	60
ET	—	—	1370	685	725	305
ETN	405	250	—	—	—	—
ETR	590	365	—	—	—	—
ETS	100	60	—	—	—	—
IM	80	50	60	30	35	15
GM	40	25	40	20	25	10

(continued on page 40)

(TABLE II (cont.)

ESTIMATES ON NUMBERS WHO WILL PARTICIPATE AND NUMBERS WHO PASS AUGUST 1957 EXAMINATIONS

Rating	To Pay Grade E-4		To Pay Grade E-5		To Pay Grade E-6	
	Take Exam	Will Pass	Take Exam	Will Pass	Take Exam	Will Pass
TE	675	420	720	360	320	135
RM	1410	875	1360	680	475	200
CT	655	405	1150	575	405	170
YN	2540	1575	2180	1090	1120	470
PN	2420	1500	820	410	415	175
MA	210	130	120	60	120	50
SK	2080	1290	1430	715	630	265
DK	525	325	400	200	145	60
CS	1735	1075	2180	1090	2740	1150
SH	1855	1150	1260	630	1035	435
JO	225	140	60	30	35	15
LI	200	125	140	70	85	35
DM	200	125	80	40	35	15
MU	280	170	260	130	95	40
MM	2740	1700	2900	1450	1010	425
EN	2500	1550	2000	1000	1370	575
MR	580	360	450	225	165	70
BT/BR	3160	1960	1900	950	550	230
EM	1870	1160	2140	1070	800	335
IC	550	340	720	360	285	120
ME	925	575	610	305	560	235
FP	1050	650	970	485	395	165
DC	840	520	620	310	595	250
PM	80	50	30	15	15	5
ML	65	40	60	30	35	15
SV	130	80	40	20	20	7
CE	160	100	160	80	50	20
CD	645	400	520	260	355	150
CN	485	300	250	125	130	55
BU	525	325	400	200	215	90
SW	135	85	110	55	60	25
UT	145	90	120	60	120	60
AD	—	—	2020	1010	3155	1325
ADJ	1910	1185	—	—	—	—
ADR	2000	1240	—	—	—	—
AT	—	—	1500	750	775	325
ATN	1200	745	—	—	—	—
ATR	700	435	—	—	—	—
ATS	100	60	—	—	—	—
AO	—	—	1090	545	715	300
AOT	210	130	—	—	—	—
AOU	1105	685	—	—	—	—
AQ	—	—	30	15	70	30
AQB	20	10	—	—	—	—
AQF	60	45	—	—	—	—
GF	100	65	10	5	35	15
AC	—	—	320	160	145	60
ACR	125	75	—	—	—	—
ACT	200	125	—	—	—	—
ACW	120	75	—	—	—	—
AB	—	—	1180	590	415	175
ABG	575	355	—	—	—	—
ABU	1925	1195	—	—	—	—
AE	—	—	860	430	310	130
AEI	550	340	—	—	—	—
AEM	265	165	—	—	—	—
AM	—	—	1280	640	785	330
AMH	380	235	—	—	—	—
AMS	1250	775	—	—	—	—
PR	—	—	100	50	155	65
PRM	70	40	—	—	—	—

List of New Motion Pictures Scheduled for Distribution To Ships and Bases Overseas

The latest list of 16-mm. feature movies available from the Navy Motion Picture Service, Bldg. 311, Naval Base, Brooklyn 1, N. Y., is published here for the convenience of ships and overseas bases. The title of each picture is followed by the program number.

Those in color are designated by (C) and those in wide-screen processes by (WS). Distribution began in April.

The Opposite Sex (794) (C) (WS): Comedy Drama; June Allyson, Ann Sheridan.

The Women of Pitcairn Island (795) (WS): Drama; James Craig, Lynn Bari.

Four Boys and a Gun (796): Drama; Frank Sutton, Tarry Green.

The Peacemaker (797): Drama; James Mitchell, Rose Marie Bowe.

The Happy Road (798): Drama; Gene Kelly, Barbara Laage.

Oklahoma (799) (C) (WS): Musical; Gordon MacRae, Gloria Grahame.

Zarak (800) (C) (WS): Drama; Victor Mature, Anita Ekberg.

The Girl in Black Stockings (801): Crime Drama; Lex Barker, Anne Bancroft.

Scandal Inc. (802): Drama; Robert Hutton, Paul Richards.

Toward the Unknown (803) (C): Drama; William Holden, Virginia Leith.

Teahouse of the August Moon (804) (C) (WS): Comedy Drama; Marlon Brando, Glenn Ford.

Friendly Persuasion (805) (C): Drama; Gary Cooper, Dorothy McGuire.

The Young Stranger (806): Drama; James MacArthur, Kim Hunter.

Don't Knock the Rock (807): Musical; Bill Haley, Alan Freed.

Bundle of Joy (808) (C): Comedy; Eddie Fisher, Debbie Reynolds.

The Tattered Dress (809) (WS): Drama; Jeff Chandler, Jeanne Crain.

Above Us the Waves (810): Drama; John Mills, John Gregson.

Spring Reunion (811): Drama, Betty Hutton, Dana Andrews.

Not of this Earth (812): Science Fiction; Paul Birch, Bev Garland.

Lizzie (813): Drama; Eleanor Parker, Richard Boone.

Scholarship Sponsored for Navy Daughters By Women's Group

A $300-a-year, four-year scholarship for girls has been set up by the Naval Academy Women's Club. To be eligible an applicant must be the natural born, legally adopted, or stepdaughter of a Regular Navy or Marine Corps officer (either on active duty, retired or deceased) or of a USNA faculty member. Preference will be given to daughters of deceased personnel.

The award is made on the basis of scholarship, character and need. It may be used to supplement other scholarships and its annual renewal during the girl's four-year college career is contingent only on the maintenance of scholastic standards and compliance with the requirements on which the original grant was based.

Application forms may be obtained from the Bureau of Naval Personnel, Washington 25, D. C., or the Naval Academy Women's Club, Annapolis, Md. Final selection of award-winners will be made by the Naval Academy Women's Club. One scholarship has been awarded, and future selections will be named from applications submitted not later than 20 March of each year.

TABLE II (cont.)

ESTIMATES ON NUMBERS WHO WILL PARTICIPATE AND NUMBERS WHO PASS AUGUST 1957 EXAMINATIONS

Rating	*Pay Grade E-4*		*Pay Grade E-5*		*Pay Grade E-6*	
	Take Exam	*Will Pass*	*Take Exam*	*Will Pass*	*Take Exam*	*Will Pass*
PRS	190	115	—	—	—	—
AG	280	175	450	225	145	60
TD	—	—	420	210	130	55
TDI	120	75	—	—	—	—
TDR	60	35	—	—	—	—
AK	1400	870	580	290	250	105
PH	—	—	560	280	200	85
PHA	255	160	—	—	—	—
PHG	650	400	—	—	—	—
HM	3870	2400	3600	1800	3600	1800
DT	595	370	370	185	200	85
SD	2260	1400	2460	1130	1535	645

TABLE III

ESTIMATES ON PERCENTAGES OF THOSE PASSING AUGUST EXAMS WHO WILL BE ADVANCED

Rating	*Advancements to Pay Grade E-4*	*Advancements to Pay Grade E-5*	*Advancements to Pay Grade E-6*	*Rating*	*Advancement to Pay Grade E-4*	*Advancement to Pay Grade E-5*	*Advancement to Pay Grade E-6*
BM	3-10%	3-10%	3-10%	EM	76-100%	76-100%	76-100%
QM	76-100%	76-100%	76-100%	IC	76-100%	76-100%	76-100%
SM	76-100%	76-100%	76-100%	ME	51-75%	11-50%	3-10%
RD	76-100%	76-100%	76-100%	FP	51-75%	11-50%	51-75%
SO	76-100%	76-100%	76-100%	DC	11-50%	3-10%	3-10%
TM	76-100%	76-100%	3-10%	PM	11-50%	76-100%	76-100%
GM	3-10%	11-50%	3-10%	ML	11-50%	3-10%	11-50%
GS	11-50%	11-50%	76-100%	SV	11-50%	51-75%	76-100%
FT	51-75%	11-50%	11-50%	CE	76-100%	76-100%	76-100%
MN	3-10%	3-10%	3-10%	CD	11-50%	11-50%	11-50%
ET	76-100%	76-100%	11-50%	CM	11-50%	11-50%	3-10%
IM	11-50%	3-10%	11-50%	BU	51-75%	51-75%	11-50%
OM	76-100%	76-100%	11-50%	SW	76-100%	11-50%	11-50%
TE	76-100%	76-100%	76-100%	UT	76-100%	76-100%	76-100%
RM	76-100%	76-100%	76-100%	AD	76-100%	51-75%	3-10%
CT	76-100%	76-100%	76-100%	AT	76-100%	76-100%	76-100%
YN	51-75%	11-50%	11-50%	AO	11-50%	11-50%	3-10%
PN	11-50%	76-100%	51-75%	AQ	76-100%	76-100%	76-100%
MA	76-100%	51-75%	11-50%	GF	76-100%	76-100%	11-50%
SK	76-100%	76-100%	51-75%	AC	76-100%	76-100%	76-100%
DK	51-75%	51-75%	11-50%	AB	3-10%	11-50%	11-50%
CS	11-50%	3-10%	3-10%	AE	76-100%	76-100%	76-100%
SH	11-50%	11-50%	3-10%	AM	76-100%	76-100%	76-100%
JO	11-50%	76-100%	76-100%	PR	76-100%	76-100%	51-75%
LI	11-50%	3-10%	3-10%	AG	76-100%	51-75%	76-100%
DM	51-75%	76-100%	76-100%	TD	76-100%	11-50%	11-50%
MU	76-100%	76-100%	11-50%	AK	11-50%	51-75%	51-75%
MM	76-100%	76-100%	76-100%	PH	11-50%	11-50%	51-75%
EN	51-75%	11-50%	3-10%	HM	51-75%	11-50%	3-10%
MR	51-75%	76-100%	76-100%	DT	11-50%	11-50%	3-10%
BT	51-75%	76-100%	76-100%	SD	3-10%	3-10%	3-10%
BR	—	—	76-100%				

Report on Living Conditions for Navymen Headed for Madrid

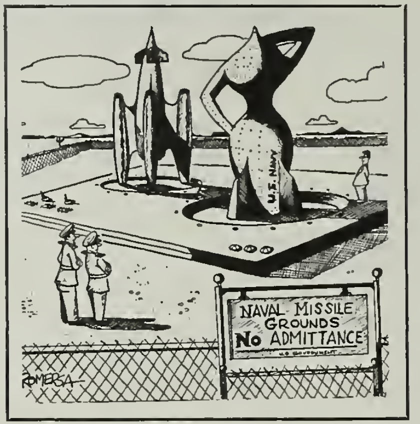
Swimming, golf, tennis, bowling, fishing, hunting, and skiing, sightseeing, bullfights and soccer, night clubs and theaters—all this and more are available to naval personnel stationed in Spain. Life there has many attractions and charms and, although living conditions may be somewhat expensive, with the customary frustrations and annoyances to be found in any foreign country, a tour of duty in Spain is well worth while. This is what you can expect:

Climate—Madrid is usually characterized by extreme dryness and sudden changes in temperature in all seasons. The winters are moderately cold, clear and sunny, with temperatures rarely much below freezing. There are occasional light snows which rarely stay on the ground for more than a few hours. The rainy season occurs in April and May. It is damp and chilly, and warm clothing is required during this period. From the middle of May to the middle of September, the temperature may range from 80 to 95 degrees in the middle of the day, to 70 degrees in the evening. During the summer months, there is a general exodus from the cities on the part of those who find it possible to go.

Language—Few Spaniards speak or understand English and, if time and facilities are available, it would be well to acquire as much Spanish as possible before leaving the States. A basic knowledge of the language is necessary and a continuing effort to become proficient is expected. Spanish lessons are readily available in Madrid and are not expensive. However, some knowledge of Spanish on arrival will be of help.

Clothing—Military personnel of MAAG wear civilian clothing while on duty. However, uniforms are required for official calls and visits to Spanish installations, some official functions, and for trips to U. S. military installations outside of Spain. Men's clothing of a weight suited to Washington, D.C., will be needed in Madrid. Light-weight gabardines, tropicals, rayons, cotton, etc., for summer wear; woolens for winter. Conservative suits are worn in the evenings. Hats are seldom worn. Good shoes are scarce in Spain, but the Air Force Base Exchange usually stocks a good supply.

All-Navy Cartoon Contest
Thomas T. Romersa, SN, USN



"I don't care if Dr. Filbrick is our most brilliant rocket scientist, he still hasn't had his mind on his work lately."

Women's Clothing—There is more social life in Madrid than at many U. S. stations. Generally speaking, fairly dressy afternoon dresses are appropriate for most functions. A couple of dressy cocktail dresses and one or two evening dresses are needed. Cocktail suits and other jacket dresses are most useful and advisable because of the fluctuating temperatures and unstable heating conditions. Suits are most popular during the colder weather. Sweaters for both day and evening wear are used constantly in all seasons. Shawls are useful.

Shorts and slacks are *not* worn in public. However, shorts may be worn at home and at some clubs. One-piece bathing suits are required at all public bathing beaches and pools, by law. Some private clubs also have this requirement, while at other clubs skirtless and/or two-piece suits are allowed.

Bring enough shoes to last for the tour of duty, as Spanish lasts generally do not fit American feet and many who have had shoes custom-made have found them hard to get used to. It is wise to include low-heeled shoes for sightseeing. It might be well to make arrangements with a store in the States to send shoes to Spain from time to time as the need arises.

Hats are not worn extensively. Attractive hats, both ready and custom made, may be purchased inexpensively. Gloves and pocketbooks are also good buys.

The BX carries stockings, American cosmetics, toiletries, slips, blouses, etc., similar to average BX and Navy Exchange stores at home.

When entering churches in Spain, not only for the purpose of attending a service but also for sightseeing, women must wear head covering and stockings, and not expose the arm above the elbow. Sleeveless or low-cut summer dresses are not acceptable unless worn with a jacket.

In general, Spanish ready-to-wear clothing is of poorer quality and more expensive than in the U. S. Nothing is pre-shrunk. Good nylon and the newest synthetic materials are not available.

Children's Clothing—Spanish children are extremely well dressed. The styles are similar to those in the U. S., except that the boys wear short pants the year round until they are 12 years old. However, American children customarily wear blue jeans and corduroys during the colder months. Children's clothes may be purchased in Spain and at prices comparable to the States. Snow suits are not generally available and should be purchased in the U. S. Sweaters are necessary, and woolen and cotton ones may be purchased at prices comparable to the U. S. Nylon and orlon sweaters are not available. Arrangements should be made to order children's shoes from the States. The BX has a small supply of some children's clothing.

Housing—No U. S. Government quarters are available in Spain. Within the past year a scarcity of housing has been noted and rentals have greatly increased. Adequate single houses range in cost from $125 to $300 per month. Families with more than four members will have trouble finding housing in the lower-price ranges. As a general rule housing will be considerably more spacious than in the U.S. and includes servants' quarters and extra bathroom(s). Utilities and heating generally are not included in the rent and this may apply to apartments as well as to houses. All types of heating are expensive and cost $25 to $50 monthly during the winter. Apartments often do not include garages. In such cases, garage space may be rented for about $12 a month and is advisable. It is customary to deposit one month's rent as security and in addition, most landlords require at least one month's rent in advance.

Unfurnished housing is rather scarce, and most of that which is available is in city apartments with no play area for children.

It is estimated that the original cost of moving into an unfurnished house or apartment is between $300 and $500 to cover the initial cost of painting, cleaning, purchasing and installing light fixtures, installing gas if desired, telephone, installing closets, electric and water meters, etc. If interested in unfurnished housing it is suggested that all furniture normally used be brought, including all electrical equipment (except clocks) plus a kitchen cabinet. Kitchens usually do not have shelving or closets.

Furnished housing is more readily available. The rental contract for the house is distinct from the contract for the furniture, and it is rare that any reduction is given on the cost of furniture even if you use some of your own. The rental cost for the furniture is usually twice the cost of the house rent—a point to be remembered when house rent is discussed. It is advisable to bring lamps of all sorts, all electrical equipment (except clocks), linens, blankets, china and silver. Most furnished housing comes equipped with china, glass, silver and kitchen utensils; however, these are often in very poor condition.

Apartment houses may have central or individual heating systems. Heat is turned on only from 1 November to 31 March. Living room fireplaces are found in all housing but small electric or kerosene heaters are frequently useful and may be purchased at reasonable prices.

A portable U.S.-make electric oven is a MUST. Bring one along for sure.

Electric service is 127 volt, 50 cycle single phase alternating current which may vary plus or minus 10 per cent. Three-phase, 4-wire 220 volt, 50 cycle AC is available for appliances offering this requirement. Electric clocks designed for 60 cycle operation will be of no value. Small auto-transformers can be purchased locally for use in locations suffering extreme voltage variations. Record players, tape recorders, etc., should be geared for 50 cycle operations. Plugs and sockets are of the European tubular type but adapters to the American type are available locally.

Home telephone service is available but unless phones and wiring are already installed, a period of three to six months may elapse before any action is taken on an application for telephone service.

A housing office has been established by JUSMG for the purpose of aiding personnel in obtaining suitable housing at reasonable rates. This office also interviews and arranges for the hiring of domestic servants. All rental contracts for MAAG personnel are required to be cleared through this office.

Rent will constitute the largest item of your budget.

There are many excellent hotels in Madrid which are considerably less expensive than comparable American hotels. Either the European or American plan is offered at the time of occupancy. Spanish hotels provide towels, but not soap.

Besides transient hotels there are several apartment-type hotels, which have completely furnished apartments including linens, silver, china, etc., plus kitchenettes. These are most desirable for new arrivals, especially those with children, during the house-hunting period. They may be rented by the day or week.

A 15 per cent service charge is added to all hotel and restaurant bills. An additional luxury tax of 10 per cent is added if the hotel or restaurant is in the "Lujo" class.

Servants — Laundering facilities, heating methods and lack of commonly used equipment in the States make it advisable to have servants. Good cooks, nursemaids and household servants are obtainable though they are increasingly hard to find. Monthly wages for maids range from $8 to $12; cooks are paid slightly more, though rarely more than $12. Most servants speak only Spanish. They usually take excellent care of children.

All servants live in the home, and, in addition to their wages, must be provided with food, some clothing, shoes, quarters, bedding, medical and dental care. Medical care may be provided by means of insurance which costs about 95 cents per person per month. Servants are given two weeks' annual vacation with pay and expect the usual gratuities in the way of bonuses at Christmas (one month's wage). Although the wages sound very low to Americans, it must be borne in mind that the actual cost of a full time servant per month is at least $50.

Food—The Spanish markets provide good fresh fruits, vegetables, meat and fish. Food prices compare favorably with those at home. Meat and fish are priced very much lower. Chicken is expensive and suitable only for stewing. Vegetables and fruits are available only in season, but are excellent while they last.

NOW HERE'S THIS

The Sniffer

Electronic Countermeasures Squadron One, at NAS, Iwakuni, Japan, has added another item to the list of labor-saving gadgets devised by Navymen.

This time it's "The Sniffer," which is used on VQ-1's P4M *Mercator* patrol bombers to spot electromagnetic radiations in the ignition systems which interfere with the electronic equipment carried aboard the planes.

The device, developed by ECM personnel of the squadron, consists of a pole for reaching up to the engine harnesses, a pick-up loop on the end of the pole and a receiver which shows up tell-tale radiations as the loop is moved along the spark plug leads.

In the pre-Sniffer era each ignition harness had to be removed from the engine and tested individually. Now, thanks to The Sniffer, the harnesses can be left in place—and a job which once took hours or even days has been cut down to less than 45 minutes.

A military commissary is established and, with the exception of fresh vegetables, it carries all American items usually found in commissaries or grocery stores at home. The BX (Base Exchange) has a "mechanical cow" which produces very good liquid milk from powdered milk.

Since there is a high incidence of TB, Americans are strongly advised by American military doctors in Spain NOT to eat *any* Spanish dairy products, including ice cream. The commissary carries all types of American powdered and canned milk, also butter. During the summer months all water is boiled for drinking and in some sections of the city, it is necessary to boil drinking water the year round. Sea food is NOT eaten by most Americans during the summer months, because of inadequate refrigeration. In the winter months the sea food is excellent.

Education—A military dependent's school, under the U.S. Air Force, has been established and all grades of grammar school and high school are included. Pupils number about 800 and the teachers are qualified Americans. The school operates bus transportation.

There are many good private schools available in Madrid with relatively low tuition rates—$19 to $56 a quarter. Instruction in these schools, with one or two exceptions, is in Spanish. Most of these schools are run by religious orders and are not coeducational. Hours are much longer than in the U. S. schools, and school is in session six days a week in most cases. Proper evaluation of credits earned by children attending Spanish schools makes them acceptable in the school systems of the U.S.

There is no established reciprocity of credits, however, between American and Spanish universities. Such reciprocity is handled on a case-by-case basis.

Religion — Spain is officially a Roman Catholic country. Besides the very numerous Catholic churches in Madrid, there is also a military Catholic chaplain who holds services at the dependents' school.

There is a Protestant military chaplain who also holds services at the dependents' school. A Protestant Sunday School also has been organized.

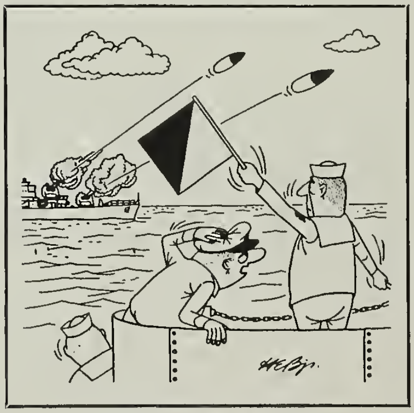
All-Navy Cartoon Contest
Paul B. Kincade, PNC, USN

"Someone's kidding you, Ragweed . . . Uniform of the day is NOT flathat and undress mattress covers!!!"

Money — The monetary unit in Spain is the "peseta." One peseta is worth approximately two and one-half cents.

It is advised that a checking account be maintained in the U. S., since U. S. cash is used in the BX, the class VI (bottled goods) store and the APO. Monthly commissary bills must be paid with American cash or by checks drawn on American banks.

Medical Care—A JUSMG military and dependents 25-bed infirmary, with U.S. Air Force doctors, is in operation. The British-American Hospital, recently established in the University City area, is modern and efficient. Military personnel and dependents also can arrange for MATS transportation and medical treatment beyond the local level at a military hospital in Germany.



"Watch your spelling!"

There are several competent dentists in Madrid who have trained in the States. However, some types of dental work are expensive and also, dentists take lengthy vacations, so that all work possible should be completed before leaving the States. Many Americans have had their children's teeth straightened in Madrid and have found the work satisfactory and less expensive than in the U. S.

The BX carries some vitamins and baby requirements, but all special vitamins, etc., should be brought with you.

Shipment of Property—You are authorized to import one automobile in the first installment of your personal effects. The first installment of effects by Spanish law theoretically means the bringing of all effects in one shipment; however, in practice the first shipment can be broken up into three or four shipments, all of them arriving at the frontier of entrance within a few months after the initial shipment. The first installment is further limited in that there can be *only one* of each household appliance.

It is recommended that insurance be placed on shipment of household effects. Policies should be read carefully to be sure that they contain provision for marine insurance and possible delay in port of debarkation awaiting transportation.

Automobiles — A personal car is strongly recommended. Any popular American car is practical. Service and repair agencies are adequate. Motor oil can be purchased at the BX, as well as spark plugs, windshield wipers, brake fluid, fan belts, batteries and tires. Replacement parts and special kits can be purchased by mail order. Some standard parts are readily available. Gasoline coupon books are purchased through the Provost Marshal's office, which makes the cost of gasoline amount to about 16 cents a gallon. Spanish gasoline costs about 45 cents a gallon. Two grades of gasoline are used in Spain, the best of which is inferior to U. S. "regular" gasoline. The "best" type is used by all armed forces personnel and although adequate, will cause all U. S. model cars to knock when under moderate strains—particularly those designed for high-test gasoline.

In order to obtain the special military drivers' license, it is necessary to have a valid permit from the United States.

Officer personnel of MAAG (LCDR and above) are entitled to Spanish diplomatic license plates and matriculation. For enlisted personnel a "carnet" or "triptyque" can easily be arranged with the American Embassy in Madrid before bringing an automobile into Spain.

You may wait one or two months before the car arrives in Spain. However, taxis are plentiful and inexpensive, and good bus and trolley service is available.

Mail—An APO is in operation in Madrid. Personnel eligible to use the APO should advise correspondents that import duty is charged on all packages sent to the local address rather than through the APO. APO airmail is available for all first class mail and is usually rapid and reliable.

Spanish mail is reasonable and prompt, but except for local city mails, is seldom used.

Pets—There is no restriction on the entry of pets into Spain, providing the animal is in good health. There is no general quarantine on arrival unless the Spanish sanitary inspector has reason to believe the animal has a contagious disease. In such a case, the animal will be quarantined (for 40 days), after which, if in good health, he will be returned to the owner. As a general rule, pets are permitted in rented quarters, but in city apartments pets are sometimes not convenient.

Miscellaneous—It is highly probable that you may have to wait one to three months for delivery of household effects; it is advisable that you include in your hold baggage bed linens, towels, blankets. Be sure to carry sweaters with you regardless of the month of arrival.

Spanish materials are not so reliable as U. S. goods, so bring your household tool kit along. Plumbing, electrical and other minor household repairs are numerous and Spanish repair is slow.

Shortwave radios permit you to get the ball games and news direct from New York. Electric roasting ovens are recommended as they are in constant use by American personnel in Spain. American non-electric alarm clocks are advised. Local radio stations operate on the same broadcast band as those in the U. S., so ordinary table radios should be of value.

New arrivals in Madrid are entitled to per diem up to 45 days while getting settled. When permanently settled they are entitled to the station allowance, which is at present $3.25 per day for those with dependents.

It takes everyone a while to become accustomed to Spanish hours. In general they are: Breakfast at 8:30 or 9:00; lunch at 2:00 to 4:30; and dinner at 9:30 or 10:00 or later.

Government warehouse storage facilities are available for the temporary storage of household effects.

Two New Courses for Officers Added to CCC Curriculum

Two new officer correspondence courses are now available at the Naval Correspondence Course Center.

Shipboard Electronic Equipments (NavPers 10762) is a 6-assignment course evaluated at 12 points credit for purposes of Naval Reserve promotion and retirement.

Petroleum Logistics (NavPers 10904) is a 9-assignment course evaluated at 18 points credit.

Application for enrollment should be made on form NavPers 992 (Rev 10/54 or later) forwarded via channels to Naval Correspondence Course Center's new address, Naval Supply Depot, Scotia 2, N. Y.

You Too Can Have a Canopy Bungee Safety

Take a short piece of tubular steel, two bolts and a piece of chain and you'll undoubtedly work up a headache trying to figure out what they're good for.

Not so with the men of Attack Squadron 34 of NAS Cecil Field, Fla., who took the same ingredients, added a generous amount of ingenuity and farsightedness and call the finished product a "canopy bungee safety," one of the several ease-of-handling devices developed by them for speedier and safer maintenance of the A4D-1 *Skyhawk.*

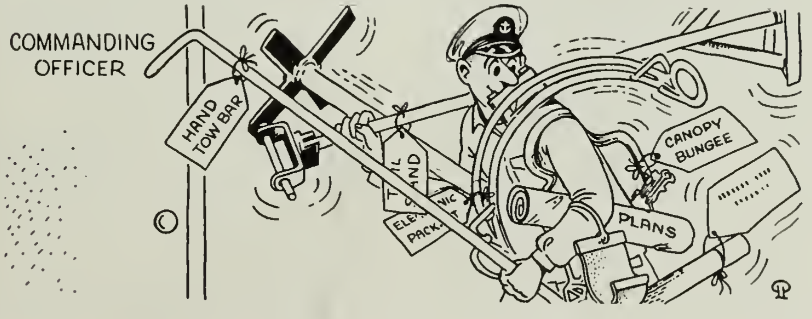
The men, who also devised a "lightweight tail stand," made of several pieces of tubing welded to a base plate, were commended in a letter from the commanding officer of the squadron to Michael J. Tufarella, AMC, in whose Air Frames Department the items were constructed.

The invention of the canopy device was inspired by the failure of an older type locking device which allowed a canopy to fall on a pilot sitting in the plane. The new safety locks the canopy open.

The tail stand is designed to prevent the tail pipe of the aircraft from touching the deck but to allow clearance of arresting wires when the nose wheel is jacked. The need for this innovation came about when it was discovered that the *Skyhawks* have a critical center of gravity which, without the tail stand, could cause the tail of the plane to settle on the deck.

Another labor-saver developed by the squadron is a tail pipe stand on which the tail pipe extends enough to permit men to work in the tail section without having to remove the tail pipe completely.

Other new gadgets include a hand tow-bar which makes possible the movement of the planes by several men, a stand for the round-shaped electronics packet (with handles for ease of installation), and a wooden stand which holds the nose of the plane while men work in the electronics section.



DIRECTIVES IN BRIEF

This listing is intended to serve only for general information and as an index of current Alnavs and NavActs as well as current BuPers Instructions, BuPers Notices, and SecNav Instructions that apply to most ships and stations. Many instructions and notices are not of general interest and hence will not be carried in this section. Since BuPers Notices are arranged according to their group number and have no consecutive number within the group, their date of issue is included also for identification purposes. Personnel interested in specific directives should consult Alnavs, NavActs, Instructions and Notices for complete details before taking action.

Alnavs apply to all Navy and Marine Corps commands; NavActs apply to all Navy commands; BuPers Instructions and Notices apply to all ships and stations.

Alnavs

No. 17—Outlines categories for the distribution of polio vaccine.

No. 18—Alerts all personnel to the highway hazards to be anticipated as a result of increased summer and holiday traffic.

Instructions

No. 1222.2—Provides means for identifying petty officers who are authorized to be placed in "in-service" training for change in rating.

No. 1301.25—Sets forth instructions regarding submission of new Officer History Card (NavPers 765) and Officer Preference and History Supplement Card (NavPers 765A). See page 35.

No. 1306.55A—Publicizes the need for additional candidates for the Basic Hospital Corps School, Class A, and invites requests from eligible personnel.

QUIZ AWEIGH

Answers to Quiz Aweigh found on page 35

1. (b) ¼ inch above breast pocket.
2. (c) Four gold hash marks.
3. (b) Midway between shoulder and elbow on right sleeve.
4. (c) Instrumentman.
5. (a) An apprentice chief petty officer (used in recruit training only).
6. (a), (b) and (c). Be sharp, neat and squared away at all times.

No. 1306.58B—Establishes revised procedures concerning the transmission of personnel data via data transceivers.

No. 1414.3B—Announces a change in time in pay grade and time in service requirements for eligibility for advancement to pay grades E-3 and E-4.

No. 1416.1C—Sets forth a plan for the determination of professional fitness for promotion of officers by means of written examinations or completion of specified courses of instruction instead of examinations.

No. 1430.7C—Provides information and guidance concerning advancement in rate or rating of enlisted personnel.

No. 1440.22—Establishes procedures for making changes in rating of some qualified enlisted personnel to the Nuclear Weapons Man rating.

No. 1500.15A—Outlines the procedures to be followed in the selection of candidates for diving instruction.

No. 1650.7—Provides information concerning the Philippine Republic Presidential Unit Citation Badge and grants authority for the acceptance of this award by certain U. S. naval personnel.

Notices

No. 1223 (25 April)—Announced Change No. 3 to BuPers Inst. 1223.1, which is concerned with the Selective Emergency Service Rates program.

No. 1611 (1 May)—Announced the names of those selected for retention as permanent USN officers.

No. 1520 (3 May)—Announced the selection of officers for the submarine school class which convened 8 July and those who are eligible to apply for the January 1958 class.

No. 1418 (8 May)—Invited attention to the schedule of service-wide examinations for advancement to be conducted in August.

No. 1750 (8 May)—Announced Change No. 1 to BuPers Inst. 1750.5A, which is concerned with the Uniformed Services Identification and Privilege Card, DD 1173.

No. 1321 (16 May)—Announced Change No. 1 to BuPers Inst. 1321.2B, which is concerned with the issuance of temporary additional duty orders inolving travel of officers and midshipmen.

No. 1520 (23 May)—Announced Change No. 1 to BuPers Inst. 1520.48A, which has the effect of increasing the mathematics and science course requirements for the Five-Term College Training Program.

No. 1520 (25 May)—Announced the eligibility requirements and procedure for officers to request postgraduate education for classes convening in fiscal year 1959.

No. 4650 (28 May)—Announced Change No. 1 to BuPers Inst. 1650.6B, which is concerned with transportation, entry and housing conditions for dependents in Japan.

No. 1085 (29 May)—Introduced the revised Officer Leave Record (NavPers 329 (Rev. 5-57)) and canceled the Report of Leave of Absence (NavPers 321).

Seasickness Is Not Possible in USS Kozubal

No crew member aboard USS *Kozubal* has ever suffered from seasickness. *Kozubal* is a shack surrounded by squadron ready rooms in the middle of a hangar at USNAAS, Saufley Field, in Pensacola, Fla.

Kozubal was so christened after several of the new men at Saufley Field complained that they had never been on a ship. So they got their heads together and came up with the solution to their problem; they would prepare themselves for any unforeseen circumstances which might necessitate their having to board a real live ship. They receive an indoctrination in shipboard procedures without leaving terra firma.

Every morning at 0600 the skipper (Frank Kozubal, ADC, for whom the ship was named) stands at the gangplank to receive his crew, each of whom must salute Kozubal and request permission to come aboard.

The ship's crew claims that their vessel collects more flight time than any carrier afloat; *Kozubal* contains the flight log books of every cadet, student officer and instructor at Saufley Field.

Even though the crew doesn't have to stand midwatches, chip paint, watch for buoy markings or take depth readings, *Kozubal* is shipshape. However, the crew is still searching for a ship's bell.

—Jack J. Hoffman, JO2, USN

DECORATIONS & CITATIONS

DISTINGUISHED SERVICE MEDAL

"For exceptionally meritorious service to the Government of the United States in a duty of great responsibility . . ."

★ Hanlon, B. Hall, RADM, usn, as Commander Joint Task Force SEVEN and as Senior Representative of the Atomic Energy Commission at the Pacific Proving Ground during the conduct of Operation REDWING, during the period 15 Mar to 21 Jul 1956.

LEGION OF MERIT

"For exceptionally meritorious conduct in the performance of outstanding service to the Government of the United States . . ."

★ Colby, Robert A., CAPT, DC, usn, as a member of the staff of the United States Naval Dental School, National Naval Medical Center, Bethesda, Md., from 14 Nov 1948 to 14 Nov 1956. In addition to his primary duties, CAPT Colby succeeded in planning, writing, and editing a book entitled, 'Color Atlas of Oral Pathology,' considered by numerous reviewers as a work of great scientific and practical value and an invaluable contribution to the field of dentistry.

★ Keith, Harry H., CAPT, usn, (Ret.), as Commanding Officer of uss *Perry* in action against enemy Japanese forces in the Philippine Islands area on 10 Dec 1941. Although wounded when *Perry* sustained a direct bomb hit, Captain (then Lieutenant Commander) Keith retained active command of his ship and supervised the removal of the many other casualties. In addition, he organized bucket brigades and succeeded in bringing the fires under control. Later, when the wooden pier to which *Perry* was moored began to burn, and explosives from a near-by ship threatened his own ship, Captain Keith ordered the mooring lines cast off which allowed his craft to drift clear of the pier where it was towed out of danger by another ship.

Gold Star in lieu of second award:

★ Fahrney, Delmer, S., RADM, usn (Ret.), as Commanding Officer Naval Aircraft Modification Unit, Naval Air Material Center, Philadelphia, Pa., during the period 3 Apr 1943 to 4 Mar 1944. In this capacity, Rear Admiral (then Captain) Fahrney was primarily responsible for the development of a reliable, radio-controlled assault drone for combat use.

★ Jones, Robert F., CAPT, usn(Ret.), as Operations Officer on the Staff of Commander Training Task Force from 3 Apr to 4 Mar 1944. Captain (then Commander) Jones played a leading role in the planning, development, and production of a reliable, radio-controlled assault drone for combat use. He prepared the courses of instruction, established the requirements for materials and equipment, pressed the purchase and construction of airfields, and improved the packing and storage of electronic materials sent overseas.

Gold Star in lieu of third award:

★ Smith, Oscar, COMO, usn(Ret.), as Commander Training Task Force, from 3 Apr 1943 to 4 Mar 1944. Under Commodore Smith's leadership, the Training Task Force succeeded in planning, developing, and readying a reliable, radio-controlled assault drone for combat use.

DISTINGUISHED FLYING CROSS

"For heroism or extraordinary achievement in aerial flight . . ."

★Fischer, Richard H., LT, usn, for heroism and extraordinary achievement in aerial flight as plane commander of a patrol bomber aircraft over the northern Bering Sea area on 22 Jun 1955. During a routine patrol his aircraft was suddenly attacked by hostile jet fighter planes whose guns wounded several of the crew and set the left wing and engine of the plane on fire. Lieutenant Fischer succeeded in eluding the attackers and, through a brilliant display of airmanship, skillfully effected a crash landing on St. Lawrence Island. Following the landing he administered first aid to the wounded and contacted rescue parties.

★Sullivan, Don M., LT, usn, for heroism and extraordinary achievement in aerial flight as pilot of a plane during the search for a downed United States naval aircraft east of Little America, Antarctica, from 6 to 9 Feb 1956. Despite hazardous terrain and adverse weather conditions, Lt. Sullivan pressed his search until he sighted and reported the location of the missing aircraft.

NAVY AND MARINE CORPS MEDAL

"For heroic conduct not involving actual conflict with an enemy . . ."

★Cowhey, William F., Jr., AT3, usn, for heroic conduct in rescuing two young girls from drowning at Pensacola Beach, Florida, 3 Apr 1956.

★Hurd, Donald W., AA, usn, for heroic conduct in rescuing two young girls from drowning at Pensacola Beach, Pensacola, Florida, 3 Apr 1956.

★Leoffler, William F., AD3, usn, for heroic conduct in rescuing two young girls from drowning at Pensacola Beach, Pensacola, Florida, 3 Apr 1956.

★Merrill, Leslie C., ENC, usnr, for heroic conduct while serving on board uss *YTL* 210 during the amphibious invasion of Southern France on 15 Aug 1944.

★Raine, Warren F., AD3, usn, for heroic conduct in rescuing two young girls from drowning at Pensacola Beach, Pensacola, Florida, 3 Apr 1956.

★Robertson, John A., LT, usn, for heroism in an effort to save life and property in the path of his crash-bound plane while serving on board the United States Naval Station, Birmingham, Alabama, on 14 Jun 1956.

BRONZE STAR MEDAL

"For heroic or meritorious achievement or service during military operations . . ."

★ Bailey, Clayton, W., CDR, usn (Ret.), for meritorious service as Radio and Electronics Officer, Training Task Force, from 3 Apr 1943 to 4 Mar 1944.

★ Burrell, John E., CDR, usnr, for meritorious service as Television Officer of Training Task Force, from 3 Apr 1943 to 4 Mar 1944.

★ Follard, James F., LCDR, CHC, usn, for heroic achievement while serving with the First Battalion, First Regiment, First Marine Division, in connection with operations against enemy aggressor forces in Korea on 23 Aug 1951.

TAFFRAIL TALK

As you may (or may not) recall, not too long ago we told of the Damage Control fellow who had worked on every ship in the Navy. Now, with equal justification, we mark for immortality the speed demon who shipped around the world seven times in three minutes. The way we hear it, CHSUPCLK William C. Blevins, a member of Task Force 43, racked up this "record" while on an observation flight at the South Pole. The plane made seven tight circles while at the mythical spot. Our informants didn't tell us whether or not he made the trip alone or was accompanied by a number of anonymous crew members of the plane.

★ ★ ★

The Naval Training Center at Bainbridge, Md., has made sailors out of recruits who've held all kinds of off-beat jobs in civilian life. But, Martin J. Roess III, SA, USNR, showed up at Bainbridge with an occupational background that was really different.

When he headed for boot camp he might well have said, "See ya' later alligator," and if he did he meant it literally, for by trade, he's a genuine "alligator baiter." Not only that, but he's had considerable experience in the care, handling and canning of snakes.

Roess' stepfather owns and operates a reptile farm in Florida. Before reporting for active duty he guided tourists around the place, helped take care of its crawling charges and even canned snake meat, which is considered quite a delicacy in some circles.

"So is alligator soup," says he.

Personally, we'll take mock turtle—and the mocker, the better, by golly.

★ ★ ★

We must also report ye passing of another fine old custom. Remember the bit of doggerel: "Worm and parcel with the lay / Turn and serve the other way?" Not any more. A mechanical marline-serving device has been developed at the Charleston Naval Shipyard. The object to be served is turned with either an electric motor or a pneumatic drill. A stand and swivel on the other end is pulled tight by a jigger or chain fall. A nine-foot sling may now be served in three minutes instead of the 30 minutes formerly required.

All very nice, but now the deck gang must figure out some other way to kill time.

The All Hands Staff

The United States Navy

Guardian of our Country

The United States Navy is responsible for maintaining control of the sea and is a ready force on watch at home and overseas, capable of strong action to preserve the peace or of instant offensive action to win in war.

It is upon the maintenance of this control that our country's glorious future depends. The United States Navy exists to make it so.

We Serve with Honor

Tradition, valor and victory are the Navy's heritage from the past. To these may be added dedication, discipline and vigilance as the watchwords of the present and future. At home or on distant stations, we serve with pride, confident in the respect of our country, our shipmates, and our families. Our responsibilities sober us; our adversities strengthen us.

Service to God and Country is our special privilege. We serve with honor.

The Future of the Navy

The Navy will always employ new weapons, new techniques and greater power to protect and defend the United States on the sea, under the sea and in the air.

Now and in the future, control of the sea gives the United States her greatest advantage for the maintenance of peace and for victory in war. Mobility, surprise, dispersal and offensive power are the keynotes of the new Navy. The roots of the Navy lie in a strong belief in the future, in continued dedication to our tasks, and in reflection on our heritage from the past. Never have our opportunities and our responsibilities been greater.

ALL HANDS the Bureau of Naval Personnel Information Bulletin, with approval of the Bureau of the Budget on 23 June 1955, is published monthly by the Bureau of Naval Personnel for the information and interest of the naval service as a whole. Opinions expressed are not necessarily those of the Navy Department. Reference to regulations, orders and directives is for information only and does not by publication herein constitute authority for action. All original material may be reprinted as desired if proper credit is given ALL HANDS. Original articles of general interest may be forwarded to the Editor.

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The Bureau invites requests for additional copies as necessary to comply with the basic directive. This magazine is intended for all hands and commanding officers should take necessary steps to make it available accordingly.

The Bureau should be kept informed of changes in the number of copies required.

The Bureau should also be advised if the full number of copies is not received regularly.

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PERSONAL COPIES: This magazine is for sale by Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. 20 cents per copy; subscription price $2.25 a year, domestic (including FPO and APO addresses for overseas mail); $3.30, foreign. Remittances should be made direct to the Superintendent of Documents. Subscriptions are accepted for one year only.

• AT RIGHT: INSIDE JOB — Below decks of USS *Albany* (CG 123), now serving with the Sixth Fleet, machinist's mate makes a maintenance check on part of the ship's complicated propulsion system.

ALL EYES are on YOU!

wherever you are you represent U.S.

ALL HANDS

THE BUREAU OF NAVAL PERSONNEL INFORMATION BULLETIN

in this issue
SPECIAL SERVICES

This magazine is intended for 10 readers. All should see it as soon as possible.
PASS THIS COPY ALONG

AUGUST 1957

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ALL HANDS

THE BUREAU OF NAVAL PERSONNEL INFORMATION BULLETIN

AUGUST 1957 Nav-Pers-O NUMBER 487

VICE ADMIRAL JAMES L. HOLLOWAY, Jr., USN
The Chief of Naval Personnel
REAR ADMIRAL K. CRAIG, USN
The Deputy Chief of Naval Personnel
CAPTAIN O. D. FINNIGAN, Jr., USN
Assistant Chief for Morale Services

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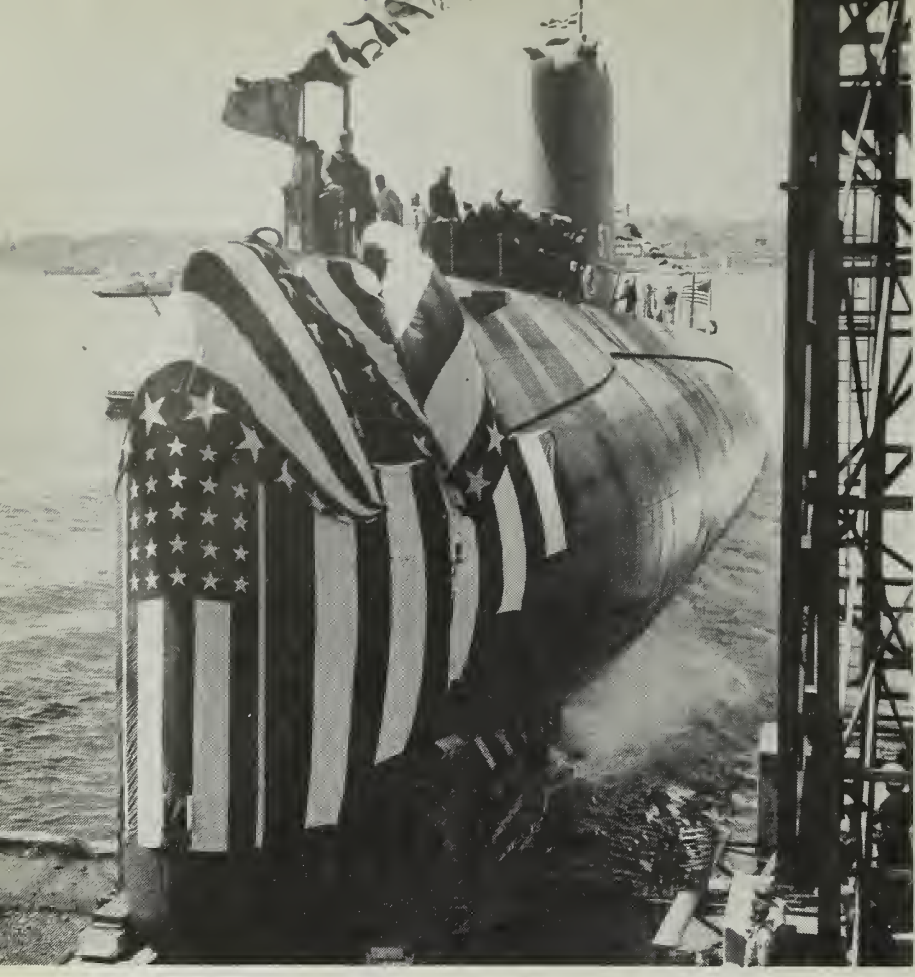
• **FRONT COVER: ALL-NAVY TALENT FINALISTS** Ralph Grasso, EN3, USN; Randy Sparks, SN, USN; Danny White, PN1, USN; and Harry Kehr, MU3, USN, were featured in Shipmate Varieties which toured nation this year. (See story page 30)

• **AT LEFT: NOSEY BUSINESS**—Aviation Electronicsmen of a carrier-based fighter squadron turn flight deck into 'work shop' as they check the complicated gear in nose of jet.

• **CREDITS:** All photographs published in ALL HANDS are official Department of Defense Photos unless otherwise designated.

So What'



WATER SKATE—Navy's atomic submarine *Skate*, SS(N) 578, shown slipping down ways at launching ceremony. Three more of her class will join Fleet.

"TIME CHANGES ALL THINGS" is an old adage and a true one—but it's a hard one to sell to a sailor who sees the same ships day in and day out, particularly if you're also trying to sell him on the nearness of a nucleonic, guided missile Fleet to replace the one he's familiar with.

Yet time does change things, the Navy included. Every year around budget time you'll hear about the Navy's plans for the upcoming fiscal year, but most of the talk and newspaper stories center around nuclear power, guided missiles and manpower. Concrete signs of progress toward a complete new Fleet—ship conversions (particularly the smaller ones), decommissioning of older ships, the awarding of contracts for many new ships, even the keel layings for smaller types—are usually overlooked by national news agencies, and by sailors who are not in the vicinity where such an event occurs.

However, even a casual roundup of such occurrences offers proof that even in a period of six months or so very real changes take place in the Navy.

Look at what the past few months have brought to the carrier Navy for instance:

- **USS *Kitty Hawk*** (CVA 63) has gotten underway with the positioning of bottom shell plating. When finished some time in 1959 she will have a length of some 1047 feet, a 129-foot beam, and will be approximately 25 stories tall from keel to mast top. Meanwhile, ***Ranger*** (CVA 61) is ready for delivery; ***Independence*** (CVA 62) is more than half completed and the keel for CVA 64 ***(Constellation)*** is scheduled for laying this fall.

At the same time two modernizations have gotten underway—**USS *Oriskany*** (CVA 34) at San Francisco Naval Shipyard, ***Coral Sea*** (CVA 43) at Bremerton. ***Ticonderoga*** (CVA 14) and ***Intrepid*** (CVA 11) have recently completed their conversions to angled-deck status—and "Ti" has reported to the Pacific Fleet in a two-way swap which found CVA 14 and ***Coral Sea*** (CVA 43) swapping oceans with ***Wasp*** (CVA 18) and ***Essex*** (CVA 9). Still another, **USS *Midway*** (CVA 41), is in the conversion mill at Puget Sound, and is about three-quarters completed.

USS *Franklin D. Roosevelt* (CVA 42), LantFleet's third largest warship, has been returned to service with a new coat of Navy grey, a permanent stabilized mirror landing system and nonskid hangar deck surface. In yet another, the business of revamping flattops to handle high-performance jet planes has gone a step beyond the angled-deck, hurricane bow, mirror landing system: **USS *Kearsarge*** (CVA 33) in addition to the above improvements, came out of the yard with part of her flight deck planked in aluminum.

Then there's **USS *Boxer*** (CVS 21), just completing her first overhaul since 1954. Nicknamed "Busy Bee" as a result of her frenetic activity, CVS 21 has completed 10 Far Eastern cruises in 11 years of commissioned service—in the process steaming more than 700,000 miles and logging some 79,000 arrested landings. *Boxer*, incidentally, by virtue of launching the F6F *Hellcat* robot plane in 1952 off Korea, lays claim to being the first ship to use guided missiles in combat.

A final note on the flattop Fleet: "Submarine Warfare Support Carrier" (CVS) is the new classification for **USS *Lake Champlain*** (CVS 39), onetime CVA.

- Cruiser men—and missilemen who're hot for sea duty—are also staring a new Navy in the face. First, there's the announcement that Long Beach, home port for many a Pacific sailor and port of call for many others, has been chosen as the name for CG(N) 160, the Navy's first nuclear-powered guided missile cruiser. Then there are a number of light cruisers being converted to launch either *Terrier* or *Talos* missiles. **USS *Springfield, Topeka*** and ***Providence,*** CLs 66, 67 and 82, are being armed with *Terriers;* while ***Oklahoma City*** (CL 91), ***Little Rock*** (CL 92) and ***Galveston*** (CLG 93) are being armed with *Talos*.

- Ceremonies at Bremerton have marked the laying of keels for **USS *Coontz*** (DLG 9) and ***King*** (DLG

10), two of the 10 guided missile frigates for which the Navy has let contracts. These 512-footers will be armed with supersonic *Terriers,* in addition to having conventional five-inch batteries. Other ships in the class include the newly-named **USS Luce** (DLG 7) and **Dewey** (DLG 14), and **Farragut** (DLG 6), **MacDonough** (DLG 8), and as yet unnamed DLGs 11, 12, 13 and 15.

Although they haven't yet reached the keel-laying stage, contracts have been let for eight *Tartar*-bearing DDGs, guided missile destroyers. Holding numbers from 952 through 959, these DDGs will have hulls of a new design, evolved from **USS Forrest Sherman** (DD 931) hull design. They will have an over-all length of 431 feet, extreme beam of 47 feet, and standard displacement of 3370 tons.

ew in the New Navy?

• Already on their way to join the Fleet are eight 1300-ton escort vessels, while construction has gotten underway on four 1350-ton DEs. The eight: **USS Lester** (DE 1022), **Evans** (DE 1023), **Bridget** (DE 1024), **Bauer** (DE 1025), **Hooper** (DE 1026), **Van Voorhis** (DE 1028), **Hartley** (DE 1029) and **Joseph K. Taussig** (DE 1030). Four, unnamed as yet: DEs 1033, 1034, 1035 and 1036.

• Names have been selected for three 2800-ton destroyers now being built. DD 945 will be **USS Hull,** the fifth Navy vessel to bear the name of 1812-vintage Commodore Isaac Hull. DD 946, **Edson,** honors a major general, USMC, who was closely associated with small-arms marksmanship in the Corps—Austin "Red Mike" Edson. General Edson (who retired in 1947 and died in 1955) won a measure of fame (and the Medal of Honor) in action with the First Marine Raider Battalion on Tulagi, Solomon Islands, during 1942.

USS Richard S. Edwards, (DD 950), third of the trio, is named for the Navy's first Deputy Chief of Naval Operations.

Other 2800-tonners which either are or soon will be in the Fleet include: **USS Jonas Ingram** (DD 938), **DuPont** (DD 941), **Bigelow** (DD 942), **Blandy** (DD 943) **Mullinnix** (DD 944) and unnamed DDs 947, 948, 949 and 951. Boston has already commissioned **Davis** (DD 937) and **Manley** (DD 940), the latter getting her name from Commodore John Manley of Revolutionary War fame.

And changes are keeping pace elsewhere in the surface Navy:

• **USS Blair** (DE 147), now being converted, is well on the way to rejoining the Fleet as DER 147—a radar picket escort vessel. **USS Durant** (DER 389), **Roy O. Hale** (DER 336) and **Lansing** (DER 388) have already completed similar conversions and the following ships are in various stages of conversion: **USS Sturtevant** (DE 239), **Newell** (DE 322), **Thomas J. Gary** (DE 326), **Ramsden** (DE 382) and **Mills** (DE 383).

• **USS Formoe** (DE 509) has joined the Portuguese Navy, another in the long grey line of naval craft which have undergone status changes courtesy of the Military Assistance Program. And **USS MSC 262** has become the Pakistani *Mubarak,* also under provisions of MAP. Her new name translated into English means "Auspicious."

• Most Navymen are unaware that the Navy has such a thing as an offshore-procurement program for ships, but **USS PC 1616,** built in Brest, France, under provisions of MAP, has been delivered to the Ethiopian Navy. *PC 1616's* primary mission with the Ethiopians will be as a training ship for the Naval Academy and Naval School at Massawa.

• **USS Lindenwald** (LSD 6), age 13, has been turned over to MSTS, destined for supply duty in DEW Line country. She was modified for Arctic work in 1949, being completely insulated and having her hull reinforced. Later this year **USS Ashland** (LSD 1) will also join MSTS for duty.

Our amphibious forces have been bolstered by **USS Hermitage** (LSD 34) and **Monticello** (LSD 35).

• Down in Florida, the Zipper Fleet has opened its gates to another old warhorse—**USS Bamberg County** (LST 209). Built in Chicago during 1943, *Bamberg County* served in the Atlantic and Indian oceans during World War II before being placed out of commission. She was reactivated during the Korean outbreak and has since served under operational control of Commander, Amphibious Forces, Atlantic.

BIG WAVE CUTTER—USS *Forrestal* (CVA 59), now with Sixth Fleet in Med., shows off her shape with jet-handling angled deck and hurricane bow.

And speaking of "Ts," the men who like that duty can look forward to the seven new ones scheduled for delivery during the coming 12 months: ***uss DeSoto County*** (LST 1171), ***Suffolk County*** (LST 1173), ***Grant County*** (LST 1174), ***York County*** (LST 1175), ***Graham County*** (LST 1176), ***Lorain County*** (LST 1177) and ***Wood County*** (LST 1178).

- During the past few months three ships have also gone into service as electronic "eyes" for the Continental Air Defense System. They are ***uss Outpost*** (YAGR 10), ***Protector*** (YAGR 11) and ***Vigil*** (YAGR 12).

There have been changes, too, in the Navy of service ships, minecraft and similar vessels:

- ***uss Mauna Kea*** (AE 22) has joined her sister ***Suribachi*** (AE 21) in the task of passing ammunition to the Fleet's gunners. Although the ammo they handle is conventional stuff, both ships were designed for faster replenishment operations and are capable of supplying two ships simultaneously. In addition to these two, construction has begun on ***uss Nitro*** (AE 23) and is scheduled for ***uss Pyro*** (AE 24) and the as yet unnamed AE 25.
- A recent dual ceremony in San Francisco also points up the changes that take place almost daily in our Navy. ***uss Polaris*** (AF 11), a tired old refrigeration ship, was retired; while at her side ***uss Sirius*** (AF 60) was commissioned.
- From attack cargo ship to participant in Bikini A-bomb tests to troop trainer is the brief story of ***uss Burleson*** (APA 67). Now she's been redesignated IX 67, the "IX" meaning a "miscellaneous, unclassified vessel."
- ***uss Bittern*** (MHC 43) will join the wooden ship Navy in New York. In an effort to keep the 144-foot coastal minehunter as nonmagnetic as possible, she was built almost entirely of pressure-treated, laminated and solid red oak. Even her walk-in refrigerator was built of plywood; with nonmagnetic bronze, stainless steel, and aluminum being used wherever metal was necessary.
- The traditional bottle of "bubbly" either has been or soon will be whacked across the bows of a miniature fleet of ocean minesweepers, nonmagnetic boats of 620 to 801 tons, bearing such names as: ***uss Stalwart*** (MSO 493), ***Sturdy*** (MSO 494), ***Swerve*** (MSO 495), ***Venture*** (MSO 496), ***Adroit*** (MSO 509), ***Advance*** (MSO 510), ***Affray*** (MSO 511), ***Ability*** (MSO 519), ***Alacrity*** (MSO 520), ***Assurance*** (MSO 521) and MAP-bound (hence, unnamed) MSOs 517 and 518.
- Other minecraft which have passed the "contract awarded" stage include ***uss MSB 29***, an 80-foot minesweeping boat; inshore minesweepers ***uss MSI 1*** and ***MSI 2***; and six MAP 320-ton nonmagnetic coastal minesweepers—MSCs 267 through 272.

And there are yet a few other changes underway in the surface Fleet:

Item: "Old Ironsides"—***uss Constitution***—has gone into drydock for major overhaul. Built in 1797, the three-masted frigate is the nation's second-oldest ship.

WHITE TOPS OF Navymen stand out duri
of a nucleonic and guided missile Fle

Item: Two 180-ton utility landing craft are well on their way to completion in New York. They're ***uss LCU 1608*** and ***LCU 1609***.

Item: A mine planter, ***YMP 3***, is abuilding at New Orleans for eventual assignment to an MAP country.

Item: Ten YPs—patrol vessels—are in various stages of completion in San Francisco. They are *YPs 654* through 663, scheduled for completion during the remainder of this year and throughout 1958.

Item: AVs 5 and 7 ***(uss Albemarle*** and ***Currituck)*** are getting their faces changed at the Naval Shipyard in Philadelphia.

Item: EAG 154, ***uss Observation Island***, (Ex-ss *Empire State Mariner*) is undergoing conversion at Norfolk.

Item: ss *Diamond Mariner* is be-

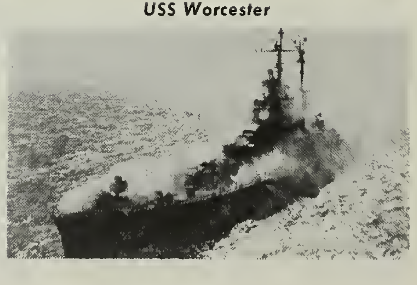
LSTs
USS Orleans Parish

CAGs
USS Canberra

AEs
USS Mazama

DDs
USS John Paul Jones

CLs
USS Worcester



DEs
USS Hammerberg

ster of ships crew. With the approach
hly trained crews will be very necessary.

ing transformed into APA 248 by a commercial yard in San Pedro, Calif.

Item: A batch of Maritime Administration hulls are undergoing (or have already completed) conversion to oilers, tankers or cargo vessels for MSTS.

Included are **USNS Comet** (T-AK 269), a 7600-ton "roll-on roll-off" cargo ship; **Eltanin** (T-AK 270), **Mirfak** (T-AK 271) and **Mizar** (T-AK 272), 1850-ton cargo ships; **USNS Point Barrow** (T-AKD 1), a 5500-ton cargo ship dock; oilers **Shoshone** (T-AO 151) and **Yukon** (T-AO 152); and the gasoline tankers **Alatna** (T-AOG 81) and **Chattahoochee** (T-AOG 82).

- The undersea Fleet has also racked up a number of changes in the past few months. For instance, any submariner who loved the boats well enough to buy one could have had **USS Pike** (SS173) on an "as is, where is, and for scrapping only" basis at a cost of something over $75,000. Although this particular *Pike* had reached the ripe old age of 21, she pulled her weight right up to the end, standing her final duty as a training vessel at USNRTC, Baltimore. *Pike,* 301 feet by 23 feet and displacing some 1290 tons, was built in 1935.

Then, 17-year-old **USS Burrfish** (SSR 312), has been decommissioned at New London, while two submarines of the 1525-ton class have been made available to Greece under the terms of MAP. **USS Jack** (SS 259) and **Lapon** (SS 260) will be formally transferred after extensive refitting and modernization.

Work is underway on three new boats of 1690 tons each, **USS Barbel** (SS 580), **Blueback** (SS 581) and **Bonefish** (SS 582). Work is also underway on a nest of nuclear boats:

- In the 2310-ton class are **USS Skate,** SS(N) 578, **Swordfish,** SS(N) 579, **Sargo,** SS(N) 583 and **Seadragon,** SS(N) 584.
- In the 2850-ton class are **USS Skipjack,** SS(N) 585, **Scamp,** SS(N) 588, **Scorpion,** SS(N) 589, **Sculpin,** SS(N) 590, **Shark,** SS(N) 591, and **Snook** SS(N) 592.
- **USS Halibut,** SSG(N) 587, now abuilding, will be a nuclear companion to **Grayback** and **Growler** (SSGs 574 and 577), both expected to join the Fleet next year.
- **USS Triton,** SSR(N) 586, is a king-size (5450 tons), nuclear-powered, radar picket submarine.

Finally, there are **USS Nautilus,** SS(N) 571, and **Seawolf,** SS(N) 575, the Navy's first two atomic boats. The 3260-ton *Seawolf*, larger and supposedly faster than *Nautilus,* has been commissioned although her nuclear power plant is not operating in top form.

Nautilus has finally been refueled after steaming more than 60,000 miles—and according to the experts at BuShips, "Refueling *Nautilus* involves replacing the submarine's nuclear reactor core, not merely inserting a new capsule of fuel. When the old core is removed, an entirely new heat generating machine is installed inside the empty steel container which remains. The new core incorporates important technical advances which will greatly extend the fuel performance, as well as making it simpler, less expensive and more reliable."

Be that as it may, a conventional boat comparable in size to *Nautilus* would have used an estimated 3,000,000 gallons of fuel oil to travel the distance steamed by SS(N) 571. That much oil would weigh approximately 22,500,000 pounds and would fill some 300 tank cars.

The Chief of Naval Operations, ADM Arleigh A. Burke, USN, has said, "This history-making completion of operation of *Nautilus* on her first nuclear reactor core during which she has so spectacularly demonstrated the military advantages of nuclear propulsion is of tremendous significance to the Navy."

Brother, if you don't believe that statement, you'd better go back and reread this roundup of what's happening to your Navy.

—Barney Baugh, JO1, USN,
OCS, Newport, R. I.

YAGRs
USS Skywatcher

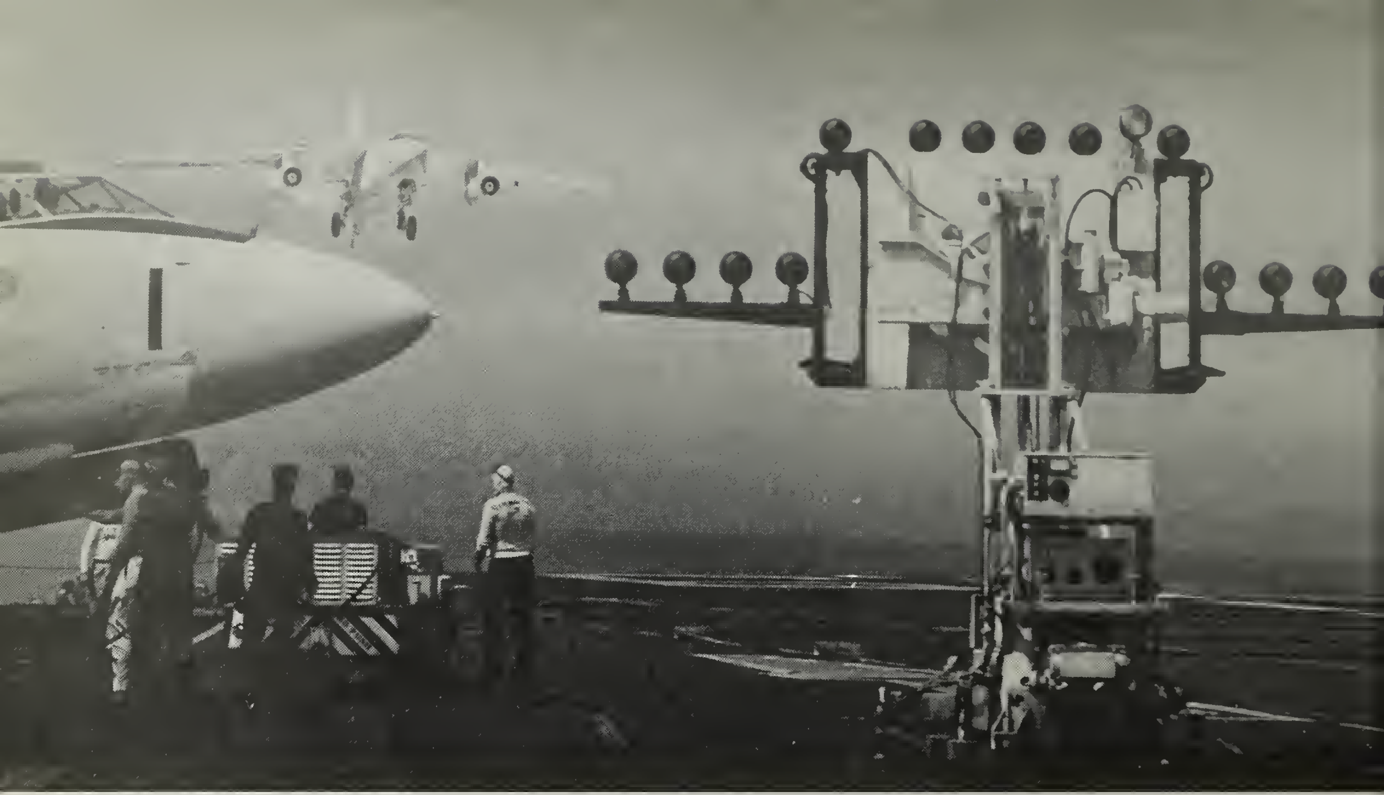
DERs
USS Kirkpatrick

CVAs
USS Franklin D. Roosevelt

AFs
USS Alstede

MSOs
USS Salute

SS(N)s
USS Seawolf



HOMECOMING — *Skywarrior* glides in for a mirror landing during flight operations on USS *Forrestal* (CVA 59).

It's Air-Op Time on CVA 59

PULL ON A GREEN flight deck jersey, adjust a sound-attenuating helmet securely over your ears, and let's see what goes on during air operations on board USS *Forrestal.*

The sound mounts as we approach the flight deck and as an F3H *Demon* screams toward a recently vacated catapult we are glad we are wearing our special head gear. All around us, Navymen in multi-colored jersey are moving swiftly, yet with an ever watchful eye.

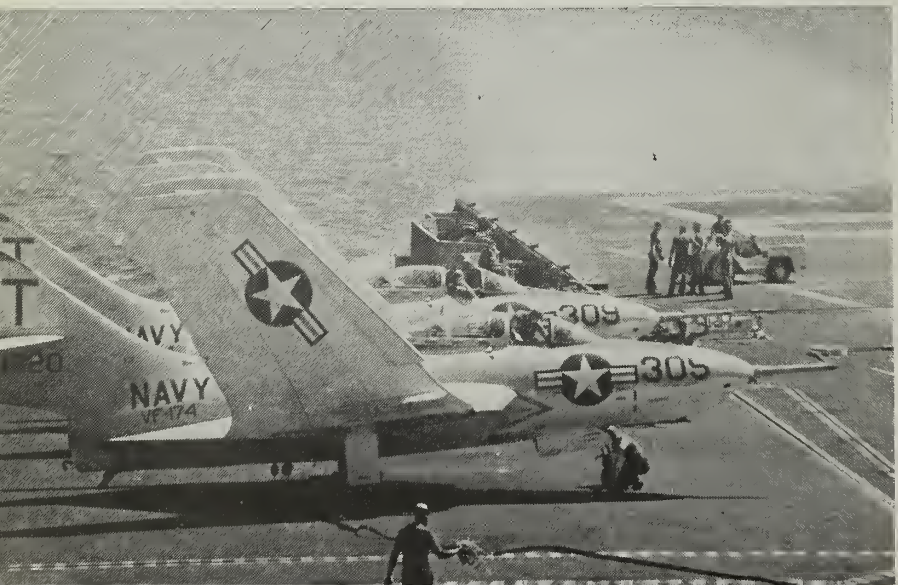
We grow accustomed to the thundering sounds and notice that what at first seemed to be turmoil is actually a many-phased action accomplishing a decisive maneuver. Tractors, or "mules," are racing continuously back and forth with planes in tow. Long snouted F9F *Cougars* are rapidly placed on the catapults, while FJ3-M *Furies* pop up simultaneously on each of the three starboard deck edge elevators.

Forward, down on the starboard catwalk we get a close up view of the next launching. Up the deck heading for the catapult nearest us is the largest airplane ever to make a carrier its base. It's an A3D *Skywarrior* unfolding its wings in preparation for flight. The "mule" turns it over to the "cat" crew who secure the powerful bomber in a flash.

Out in the middle of the deck the catapult officer flashes his arm forward and an F2H *Banshee* photo plane shoots from number two catapult. Pivoting but maintaining his present position, the cat officer coordinates the activities by arm motions and signals the readiness of an A3D to men in the catapult room. With his arm straight up in the air he rapidly circles two fingers, demanding full power from the jet bomber, then he brings his arm down in an arc and points dramatically forward toward the bow of the ship. In a second the 70,000-pound *Skywarrior* is hurled into the air.

Another jet blasts off the angled deck's number three catapult and a *Cougar* leaves Number Four. Above us the men in blue and green under direction of yellow-shirts are already

DEADLY DUO—Two *Cougar,* F9F, jets line up on flight deck of large carrier.

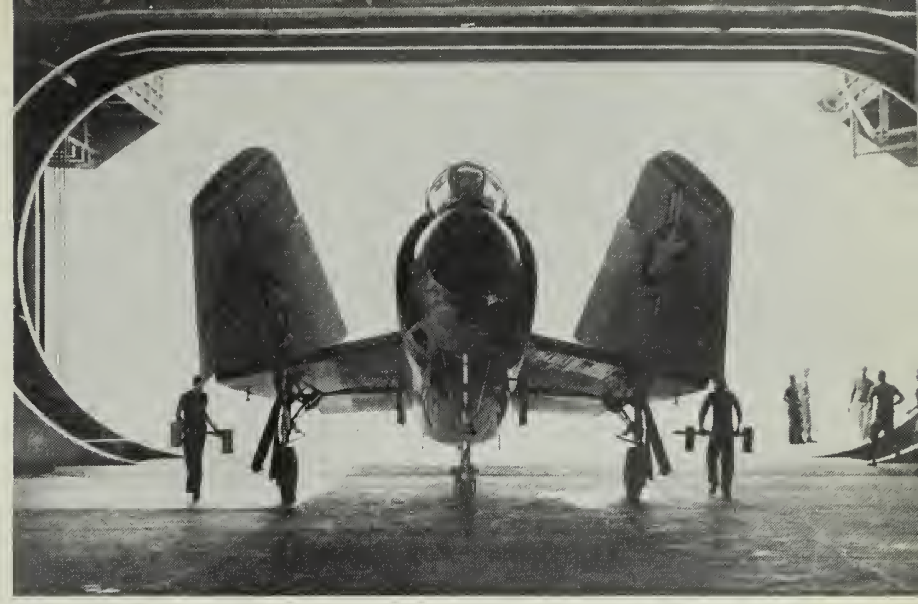


squaring away another A3D for launching on the cat nearest us. Elevator Number One brings up another *Demon.* Farther down the deck amid the high-pitched screams of *Cougars* and *Furies* can be heard the throbbing vibration of the AD-5N *Skyraiders.*

High above our heads jets circle for a landing. The ship's captain swings the powerful *Forrestal* into position allowing maximum wind to cross the angled deck. Here they come, formations of *Cougars, Furies,* and *Banshees.* Each time the arresting cables catch them, holding on like a powerful leash. With the varying weights of the different aircraft the arresting gear is gauged anew. A quick change is made as one of the big bombers makes its approach. A dot at first, the mighty plane grows in size while far below in the Carrier Control Approach room an Air Controlman communicates with the pilot directing him into the glide path. Once in the slot the Landing Signal Officer teams with the landing mirror and the pilot's reflexes to bring the *Skywarrior* in for a landing.

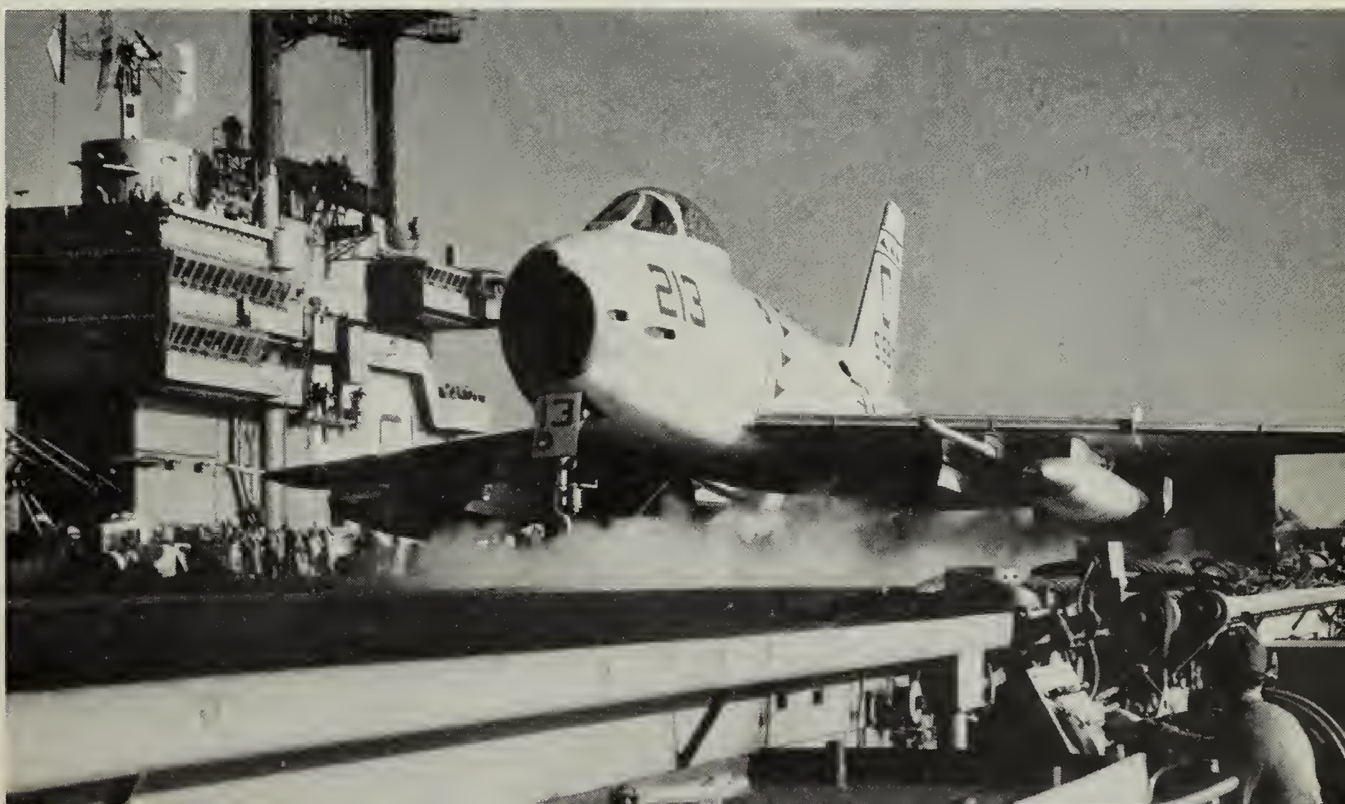
By now activities which in the beginning were so confusing become clear to us, but we still wonder how all this action was so accurately and precisely accomplished in only 15 minutes.

—Charles A. Tague, SN, USN.



INSIDE JOB — In hangar deck jet fighter moves in from deck edge elevator. *Below:* F8U-1 *Crusader* leaves fiery path as it blasts from steam catapult.

CATWALK VIEW — *Fury* gets all steamed up for catapult launching that will have jet airborne in seconds.



THE WORD

Frank, Authentic Advance Information On Policy—Straight From Headquarters

• **VIET-NAM PUC**—The Viet-Nam Presidential Unit Citation Badge may now be worn by Navymen who served in eligible ships or units during the evacuation of civilians from north and central Indo-China in August and September 1954.

Known as the "Ribbon of Friendship," the award was authorized by the President of the State of Viet-Nam to recognize humanitarian services performed by our armed forces in helping thousands of Viet-Namese to escape Communist domination.

Since the award was made to units and not to individuals, it may be accepted without Congressional approval.

The insigne for it consists of a ribbon bar, enclosed in a gilt frame. It may be purchased at most uniform shops, and will not be stocked by the Department of the Navy. No additional distinguishing devices are authorized to indicate eligibility in more than one of the units cited. The ribbon will be worn after U. S. small arms ribbons, after all foreign personal decorations and after the Philippine and Korean PUC badges.

Ships and units eligible for the award are listed in BuPers Inst. 1650.8, and individual eligibility will be determined by commanding officers through service record data, orders or the individual's sworn affiidavit.

In the case of officers, a letter authorizing the wearing of the ribbon will be issued to the individual by his CO and a copy of the letter will be forwarded to this Bureau for filing in the officer's jacket. For enlisted men, the individual's eligibility will be substantiated by an appropriate entry in the "administrative remarks" section of the enlisted service record.

• **OKLAHOMA DRIVER'S PERMIT**—If you're from Oklahoma, better check your driver's permit. According to a new law passed by the 1957 legislature, any member of the armed forces whose residence is in the state of Oklahoma and who held an operator's or chauffeur's license when he entered the service, must renew his license on or before each expiration date so long as he is in the service.

If you are a resident of Oklahoma and hold a valid Oklahoma driver's license, you may renew it on or before its expiration date without charge.

If your driver's permit is expired, you may renew it by contacting an Oklahoma Driver License Examiner; or by writing to Department of Public Safety, Central Files Division, Box 1826, Oklahoma City, Okla. Be sure to state your full name, date of birth, and number of license.

This new law makes it illegal for an Oklahoma Navyman (or member of any of the armed forces) to operate a car with an expired Oklahoma driver's license.

• **SCHOOL FOR REENLISTEES**—Former Regular Navy personnel who can qualify may be assigned to a Class A, B or C school when they reenlist.

Although the program for USN ex-enlisted personnel will offer some of the same schools and conversion opportunities as those available to active duty personel, no absolute guarantee can be made. This means that if you are a reenlistee, you will have to be qualified in accordance with the current standards and a quota must have been allocated at the time of your reenlistment. The priority for allocating quotas will be active duty personnel first, and former Regular Navy personnel second.

Class A schools for which quotas can be requested are: Radarman, Fire Control Technician, Electronics Technician, Radioman, Machinist's Mate, Boilerman, Electrician's Mate, I. C. Electrician, Aviation Electronics Technician, Aviation Guided Missileman, and Aviation Fire Control Technician.

Class B schools for which quotas may be requested are: Aviation Machinist's Mate, Air Controlman, Aviation Electrician's Mate, Aerographer's Mate, Aviation Structural Mechanic, Aviation Electronics Technician, Boilerman, Electrician's Mate, Electronics Technician, Fire Control Technician, I. C. Electrician, Radarman, Radioman, Photographer and Tradevman.

Class C schools for which quotas can be requested are: Air Conditioning and Refrigeration, Compressed Gases, Teletype Maintenance, Basic Electricity and Electronics, Basic Engines and Aviation Fire Control Technician Conversion.

Waivers of test score criteria are being granted to the same extent as are granted to personnel on active duty, but waivers of rating and pay grade are not being granted. Quotas are being allocated only when the quotas cannot be filled by active duty personnel.

• **OPEN RATES**—Reservists serving on active duty may enlist in the Regular Navy in any of the open rates included in the latest list. This means that if you are a Reservist serving in any of the rates noted below, you may transfer to the Regular Navy in your present rate.

DON'T take off with this issue. Keep it circulating until nine other men get a chance to see it. PASS THIS COPY ON.

If you are serving in a rate not included in the list below, you may transfer to the Regular Navy in the highest pay grade in your rating in which a shortage exists.

These are considered to be open rates according to BuPers Inst. 1130.4D: QM2, QM3; SM2, SM3; RDC, RD1, RD2, RD3; SOC, SO1, SO2, SO3; TM2, TM3; ET2, ET3; RMC, RM1, RM2, RM3; CT1, CT2, CT3; MR1, MR2, MR3; EM2, EM3; ICC, IC1, IC2, IC3; AT1, AT2, AT3; AQ1, AQ2, AQ3; AC1, AC2, AC3; AE1, AE2, AE3; AG2, AG3; TD2, TD3; AK2, AK3; SN, SA, SR; AN, AA, AR; CN, CA, CR; HN, HA, HR; DN, DA, DR; FN, FA, FR.

• **TERMINATING NSLI WAIVERS**—If you are one of some 20,000 *permanent* plan NSLI or USGLI policyholders who are paying premiums by allotment, and have NOT notified the Veterans Administration to terminate your in-service waiver of premiums, the financial future of your family may be at stake in the event something should happen to you. The same thing may happen if you have *term* insurance under in-service waiver of premiums.

Under Public Law 881, if you die after 1 May 1957 while you have NSLI or USGLI in force UNDER IN-SERVICE WAIVER of premiums, no dependency and indemnity compensation under the Survivor Benefits Act will be paid to your survivors. Just think for a minute what this can mean. Your survivors would only be authorized the benefits provided by law prior to 1 Jan 1957; they would not be eligible for the provisions of the Servicemen's and Veteran's Survivor Benefits Act. That's because when your insurance is under in-service waiver the government is paying the "pure insurance risk cost" of your insurance; you are still covered by government insurance but you don't in effect pay the full premium (in the case of permanent insurance) or any premium at all (in the case of term insurance).

Do you know whether or not your insurance is *still* under waiver?

In the case of *term insurance,* if you register an allotment for payment of premiums the in-service waiver of premiums will be automatically canceled. If you are *not* paying premiums on term insurance AND if you have *not* canceled the in-service waiver of premiums, your policy is still in effect but under waiver. Check on this now.

The best thing to do, if there is any doubt in your mind, is to write to the Veterans Administration Insurance Center, Munitions Building, Washington 25, D. C., and ask them to terminate the waiver and you then resume the premium payments. In this way your dependents get the full benefits of BOTH the NSLI (or USGLI) AND the Survivor Benefits Act. If you write VA and terminate the waiver but don't resume the premium payments the policy will then automatically lapse, but your dependents will be covered by the Survivor Benefits Act. (Talk with your insurance officer first before you give up your insurance; he can explain its top money-for-money value.)

In the case of *permanent plan* insurance, even if you have an allotment for payment on your insurance, it may still be under waiver. Many permanent plan policyholders paying premiums by allotment figure that no further action is necessary on their part to terminate their. waiver. *This is not true.*

If you want to cancel your Section 622 waiver on a *permanent* plan policy, submit a request in writing to Veterans Administration Insurance Center, Munitions Building, Washington 25, D. C. Submit it NOW. (Incidentally the use of VA Form 9-5782, previously authorized for terminating a waiver, is no longer permitted.)

As always, when writing to the Veterans Administration, make sure you include your full name, present and previous service or file number, date of birth, policy number or numbers (if known), and permanent mailing address.

That figure of 20,000 insurance policies under waiver mentioned earlier is staggering when you consider that it represents 25 per cent of the total who are permanent plan policyholders paying premiums by allotment and who probably don't know their insurance is still under waiver.

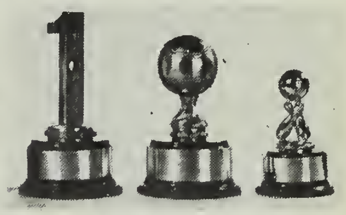
Sure, you *can* continue to keep the waiver as long as you are on active duty and 120 days after. But remember, if you die of service-connected causes with the in-service waiver in effect, your dependents would not come under the new law but would only receive the benefits authorized before 1 Jan 1957.

See your Insurance Officer now.

QUIZ AWEIGH

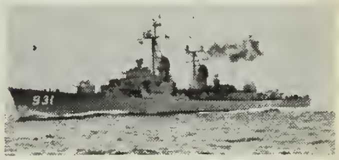
Here are three trophies awarded by the Bureau of Naval Personnel for golf, softball or baseball, and bowling.

1. All are hard to get but the one most often given is the award for (a) a hole-in-one (b) a no-hit, no-run baseball game, or perfect softball game (c) a 700 series in bowling.



2. Having qualified for one of these awards, to get it you must (a) be recommended for one of the awards by your CO (b) apply to the Bureau yourself (c) have your opponent or partner apply for you.

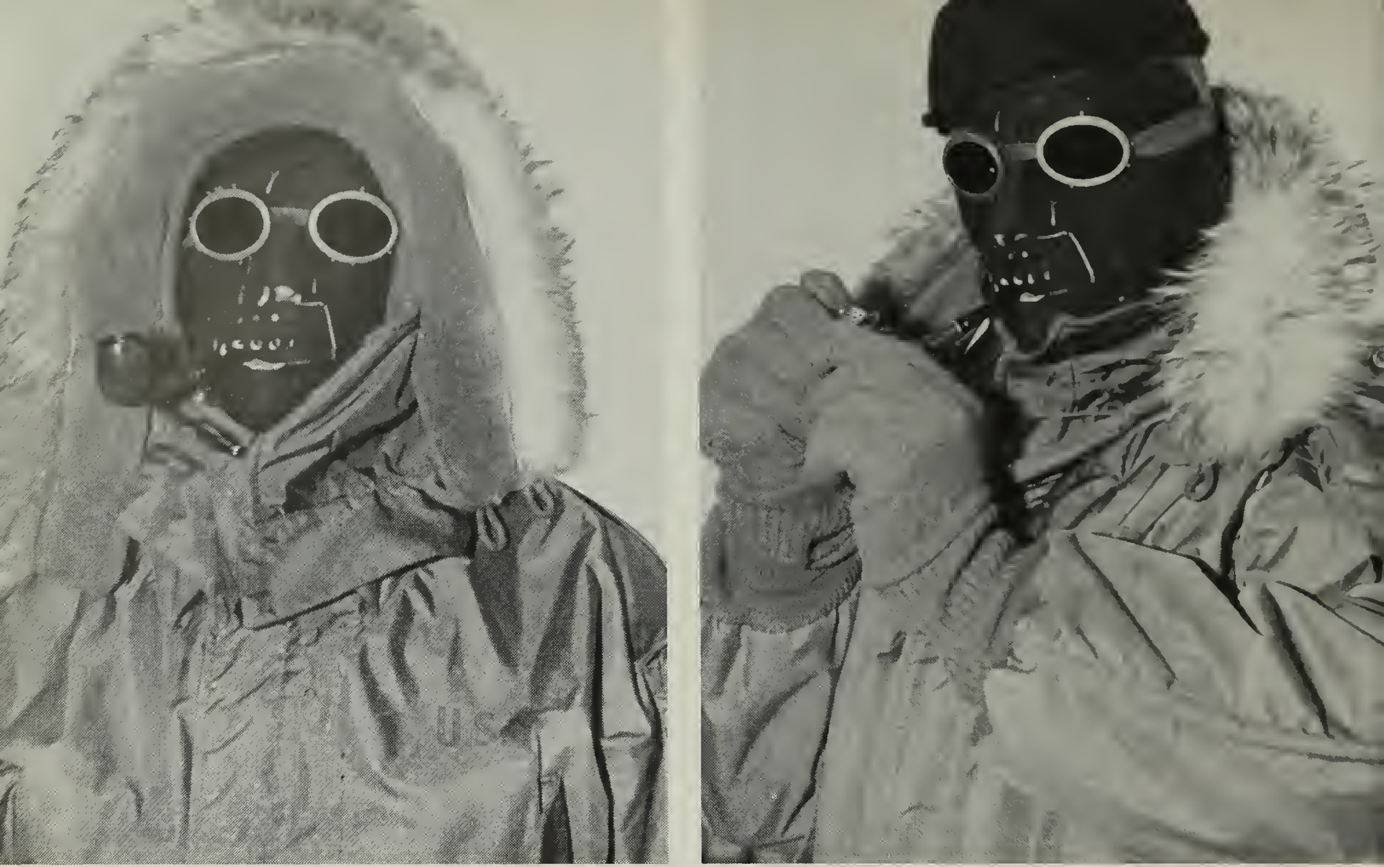
3. This is the famed "Iron Man Trophy," first presented to USS *Mississippi* in 1919. It was last awarded in 1950 and the ship which remains as its defender is a (a) submarine (b) cruiser (c) battleship.



4. Since not all Navymen are sports experts, here's a picture of one of the Navy's latest "work horses." If you are up to par on today's Navy, you'll know this ship is a DD of the (a) *Gearing* class (b) *Sherman* class (c) *Norfolk* class.

5. This new class of ships is equipped with (a) three five-inch guns, one set of four torpedo tubes and four three-inch antiaircraft guns (b) eight three-inch guns, five torpedo tubes and six rocket launchers (c) guided missile launchers, torpedo tubes and antiaircraft guns.

Good Luck! You'll find the answers on page 56.



FIGHTING THE BITTER BITE—Navymen on Antarctic expedition wear new-type masks allowing easier breathing, eating.

With NAVY and IGY in the

FRIDTJOF NANSEN, the Norwegian Arctic explorer, naturalist and statesman, once said: *"The history of the human race is a continual struggle from darkness toward light. Man wants to know and when he ceases to do so, he is no longer man."*

For many months, and even years, preparations have been going on all over the world for a major advance in one part of that struggle for knowledge—the International Geophysical Year 1957-58, which officially began in July. During that 18-month cooperative effort, scientists of some 40 nations will probe the earth from pole to pole and from the depths of the ocean to the reaches of outer space to gather new knowledge of the planet that man calls home.

To scientific minds, one of the most exciting phases of IGY will be the investigations and observations made in and from Antarctica—a continent almost twice as large as the United States, yet so cold, barren and defiant that up until 1956 most of its interior had never been seen by man. Eleven nations—the United States, Argentina, Australia, Chile, France, Japan, New Zealand, Norway, South Africa, the Soviet Union and the United Kingdom—will man observation stations on that vast white wasteland as part of the IGY program.

One of the key assignments in this attempt to conquer a continent is "Operation Deep Freeze," the Navy's task of setting up and supporting seven American outposts at the bottom of the world. That's a pretty big order for a place where the temperature may drop to 120° below zero and where the wind can top 100 miles an hour, but fortunately the Navy has plenty of experience in Antarctic exploration. LT Charles Wilkes, USN, is generally credited with announcing the existence of an Antarctic continent back in 1840, and in more recent times no name has figured more prominently in Antarctic operations than that of the late RADM Richard E. Byrd, USN.

The Navy's latest Antarctic venture, directed by RADM George J. Dufek, USN, is the biggest of them all. It went into the planning stage back in 1954 and it won't be concluded until 1959. That sounds like a long time, but when you consider there are only about three good

HELPING HAND—*USS* Atka (AGB 3) brings much needed crates of cargo to "snow-bound" Antarctic station.

months a year for cargo ships to operate in the Antarctic, all the work that has to be done and the conditions facing the men who must do it, you start to realize that isn't so long after all. Here, in brief, is the Deep Freeze story so far.

You might say that Deep Freeze really began on 1 Dec 1954, when a sturdy gray ship, with the squat lines and determined look of a bulldog, shoved off from Boston, Mass., carrying 276 Navymen and technical observers. This was the 6500-ton ice breaker, USS *Atka* (AGB 3). Her primary mission was to find out if Little America IV, staging area for Operation Highjump in 1946-47, would still be usable as a base for the IGY operations.

Atka reached Wellington, New Zealand, long used as a jumping-off place for American Antarctic expeditions, on 1 Jan 1955, and two weeks later was at the edge of the Ross Ice Shelf, a huge sheet of ice 50 to 800 feet thick and as large as the State of California. Here, beside the Bay of Whales, the United States had set up bases for its Antarctic operations since Little America I was established in 1928.

ANTARCTIC

Atka returned to Boston on 12 Apr 1955 after a 132-day cruise. During the 46 days she spent in the Antarctic she had mapped several hundred miles of the coast, made five landings on the ice and found three possible sites for bases. She also took soundings of more than 30,000 miles of ocean bottom and made the first American survey of Rochedos São Pedro e São Paulo in the mid-Atlantic near the equator.

In addition, the civilian scientists on board were able to keep a continuous record of cosmic ray investigations from the ship, important ice studies were made, air samples were taken for measuring carbon dioxide content, meteorological recordings were taken and the angles of the earth's magnetic field in the Antarctic were measured. The cosmic ray data taken aboard AGB 3 tend to indicate that the plane of the earth's magnetic equator is tilted from the geographic equator much more than was previously thought. And, the meteorological observations and weather maps made during the cruise have helped make it easier to predict the weather for Antarctic flight operations.

The importance of *Atka's* cruise was summed up by Admiral Dufek, when he said that without the information she gathered Operation Deep Freeze I "would have been a failure."

While *Atka* had been scouting the beachheads, preparations for the actual invasion of Antarctica were in full swing. Supplies and equipment, ranging from long underwear to 35-ton tractors, had to be assembled. Men had to be trained. Ships and aircraft had to be readied. And, thousands of big and little details had to be taken care of.

Then, on 30 Oct 1955, USS *Edisto* (AGB 2), sailed from Boston, and Deep Freeze I was officially underway. Besides *Edisto*, the ships taking part were: the icebreakers, USS *Glacier* (AGB 4) USCGC *Eastwind* (WAGB 279); the cargo ships, USNS *Greenville Victory* (AK 237), USS *Wyandot* (AKA 92) and USS *Arneb* (AKA 56); the tanker, USS *Nespelen* (AOG 55); and the self-propelled gasoline barges, *YOG 70* and *YOG 34*. (*YOG 34* was towed from Norfolk to New Zealand by *Glacier*. *YOG 70* was towed from Panama to New Zealand by *Edisto*.)

In addition to the crews of the ships, the units involved included Mobile Construction Battalion (Special), Air Development Squadron Six, Cargo Handling Battalion One and air elements of Helicopter Utility Squadrons One and Two.

Altogether, about 1800 men took part in Deep Freeze I. The main objective of the operation was to set up two self-sustaining bases—one near McMurdo Sound, and the other on Kainan Bay, about 400 miles away on the western edge of the Ross ice shelf. The base at McMurdo Sound, an Air Operations Facility, was to be the staging area for the establishment of an IGY station at the South Pole itself. Little America V, on Kainan Bay, was to be headquarters for the American IGY effort in Antarctica.

The first Deep Freeze I ship to reach the area was *Glacier*, which was in sight of Mount Erebus, a volcano on Ross Island, McMurdo Sound, on 17 Dec 1955. Before long, helicopters were sent out to look for a suitable landing strip, and one was found at Hut Point, near a cabin built by Captain Robert Scott's British Antarctic expedition in 1902. Then, the other ships of Task Force

GETTING THE ONCE-OVER—Emperor penguins are dubious as Deep Freezers move into McMurdo Sound preparing for International Geophysical Year.

43 took plane guard stations for the historic flight completed on 20 Dec 1955, when two P2V *Neptunes* and two R5D *Skymasters* landed at the Hut Point strip after an unprecedented 2250-mile hop from New Zealand to the Antarctic. In the next three weeks these planes made 11 flights into the unexplored regions of the southernmost continent.

After guarding the air route, the ships and men of Task Force 43 turned to the job of unloading supplies and equipment, building bases and scouting sites for the IGY bases to be constructed in the next phase of Deep Freeze. In three months of operation, Task Force 43 delivered 9000 tons of equipment and materials which were converted by Seabees into the two permanent bases.

At McMurdo Sound, Williams Air Operations Facility (named for Seabee Driver Richard T. Williams who died in a tractor accident) was completed and materials were landed for an airlift to the South Pole station due to be built the next year. At Little America V, besides completing the base, the Task Force had stockpiled materials for a proposed station in Marie Byrd Land.

When the ships were not directly engaged in unloading cargo or breaking ice they made hydrographic and oceanographic investigations of the Antarctic Ocean.

Glacier, the first ship into the Antarctic for Deep Freeze I was also the last to leave, departing from the area on 30 Mar 1956. Behind her she left wintering-over parties of 93 men at McMurdo Sound and 73 men at Little America, so that they could complete additional buildings and get an early start on the work of Deep Freeze II. The two *YOGs*, loaded with aviation gasoline, were also left behind, frozen in the ice of McMurdo Sound so their cargo would be available for the planned airlift to the South Pole during Deep Freeze II.

For the next nine months radio was the only contact the wintering-over parties had with the rest of the outside world.

In July 1956, while the folks at home sweltered in a torrid summer, the Seabees at McMurdo Sound began working on an airstrip in temperatures that dropped as low as 58° below zero. The strip had to be ready for the first Deep Freeze II planes, scheduled to arrive in October with the beginning of the Antarctic summer. The work was a mighty challenge, even for the Seabees. Here, in the words of Charles A. Bevilacqua, BUC, USN, is how it went:

"The project was to remove all the loose snow and make an ice runway. We kept two specially-built tractors working around the clock on this job. Although the engines wouldn't freeze while the tractors were running, we had pure alcohol in the radiators.

"But then nature took a mean twist, and in September we suffered the worst blizzard of the season. Not only did it ruin the work already accomplished on the strip, but it stopped all work for five days. When we dug ourselves out, we found that the storm had dumped so much

AN ICY RUN—P2V-7 *Neptune* takes off on mission from McMurdo Sound Air Strip in support of Navy's part in IGY.

snow on our project that further work on that site was impractical."

Despite this setback, the Seabees of MCB (Special) turned to on another strip, working in two 12-hour shifts, and on 16 Oct 1956 the job was done. Next day, a Navy *Skymaster* flew in, bringing Admiral Dufek and the first mail the wintering-over party had received since it began its icy exile long months before. With the arrival of the first plane, Deep Freeze II, involving 3525 men, 12 ships and 40 aircraft, had begun.

For this operation the ships back from Deep Freeze I included *Glacier, Greenville Victory, Wyandot, Arneb* and *Nespelen.* The trail-blazing *Atka* was also part of the task force, as were: the icebreakers, USCGC *Northwind* (WAGB 282) and USS *Staten Island* (AGB 5); the MSTS cargo ships, USNS *Pvt. Joseph F. Merrell* (AKV 4) and USNS *Pvt. John R. Towle* (AK-240); the seaplane tender, USS *Curtiss* (AV 4); and the scout vessel, USS *Brough* (DE 148).

Others taking part included Deep Freeze I veterans from Mobile Construction Battalion (Special), Air Development Squadron Six, and Helicopter Utility Squadrons One and Two, plus newcomers to Antarctica from Detachments Able and Baker of Mobile Construction Battalion One, units of Cargo Handling Battalion Three and the Air Force's 52nd Squadron, 63rd Troop Wing.

The first ship to arrive was again *Glacier,* which set a record for early penetration of the Antarctic pack ice when she reached McMurdo Sound on 28 October. Just three days later another record was set by an R4D *Skytrain* which became the first plane to land at the South Pole. Admiral Dufek, followed by six other Navymen, got out of the aircraft to become the first men to set foot on the pole since the ill-fated Scott party of 1912, and the first Americans ever to stand there.

But, "firsts" were only a sideline for the men of Deep Freeze II. The main goals were to resupply the Little America V and McMurdo Sound bases and set up five new stations for the IGY program—the Amundsen-Scott IGY South Pole Station, Byrd Station in Marie Byrd Land. Adare Station on Cape Hallett, the Wilkes Station on the Knox Coast and the Ellsworth Station on the Filchner ice shelf.

The air operations during Deep Freeze II were the most extensive ever conducted in the Antarctic, and to support them a temporary camp and emergency airstrip were set up at Beardmore Glacier.

During the expedition, Air Force *Globemasters* flew 65 missions to the South Pole, 17 to Byrd Station and two to the Beardmore airstrip. They dropped 760 tons of supplies at the Pole and 240 tons at Byrd while logging some 2500 hours of flight time. This included 128 sorties and 34 round-trip flights over the 1669 air-miles of ocean between New Zealand and Antarctica. *Brough* stood plane guard in the rough waters along the route. She also delivered mail and supplies to the New Zealand meterological station on Campbell Island, 400 miles south of New Zealand.

SKY AND SNOW are all that is visible as Seabee tractor train carries supplies and equipment 600 miles from Little America V to Marie Byrd Land.

The invasion of the Antarctica was truly triphibious. Transportation of men and material to the Amundsen-Scott South Pole Station was handled through air-drops and ski-plane flights.

Byrd Station was set up through an overland (or oversnow) sledge haul of nearly 650 miles, and amphibious techniques were used in setting up Adare and Wilkes Stations (At Ellsworth Station cargo was off-loaded on the ice shelf as it had been at Little America.)

Finally, in March 1957 the support phase of the operation was completed. The last ship and the last plane had withdrawn, leaving 248 military personnel and 70 IGY scientists to man the isolated outposts at the end of the earth. Eighteen of these men are now spending the winter at the South Pole Station, where temperatures of 120° below zero are expected. Up until now no human being has ever wintered at the Pole, but this "first" is merely another by-product. The real objective of all the wintering over parties will be knowledge and existence.

So far, this effort to find out what "man wants to know" has cost the lives of seven Navymen and one Marine since *Atka's* cruise back in 1954. The names of these eight, along with the names of 14 others who have died in Antarctica since 1899, are listed on a plaque in the chapel at Williams Air Facility. The inscription appearing on that plaque reads:

"In seeking to unveil the Pole, they found the hidden things of God."

—Jerry Wolff

Duty on Navy's Sky Watchers

A FEW HUNDRED MILES off our coasts, slow-moving merchant-type ships plod their way—apparently on no particular business, bound for no particular destination and certainly in no hurry to get there.

They were there yesterday, and the day before. They'll be there tomorrow, and the day after—watching, waiting.

They are YAGRs—the latest Navy word in watchdogs.

YAGRs are ocean radar station ships (see ALL HANDS, September 1956, p. 25). Recently converted from World War II "Liberty" cargo vessels, they are now on stations in the Atlantic and Pacific defense system.

The first YAGRs joined the Fleet in the spring of 1955, after being converted at Norfolk, Va., and Charleston, S. C. Others joined the group early in 1956, and there are still more to come. They carry such names as *Skywatcher, Guardian, Scanner, Locator and Interceptor*—to mention a few.

Their names describe the vital role they play. The YAGRs operate in both the Atlantic and the Pacific, helping to form a protective radar screen ringing the continent to seaward.

Equipped with the latest improvements in electronic detection and communications devices, the ships are on the alert to intercept, warn and spread the alarm in case of unexpected attack on U. S. shores.

Actually, their job goes beyond a simple warning. For example, if an air or surface attack should come, the YAGRs would be on the job to alert interceptor planes, then help them in keeping tabs on the enemy.

The Navy's role in Continental Air Defense (CONAD)—and the job of the YAGRs, along with the radar picket ships and planes, was covered in detail in the September 1956 issue. But here is a brief description of what life is like on a typical YAGR.

Because they must stay at sea for long periods, YAGRs are comfortable ships. And, of importance to the taxpayer, they are economical to operate. The Navy had all this in mind when the vessels were plucked from rows of "useless" cargo ships in the Maritime Administration's Reserve Fleets at Wilmington, N. C., and Mobile, Ala.

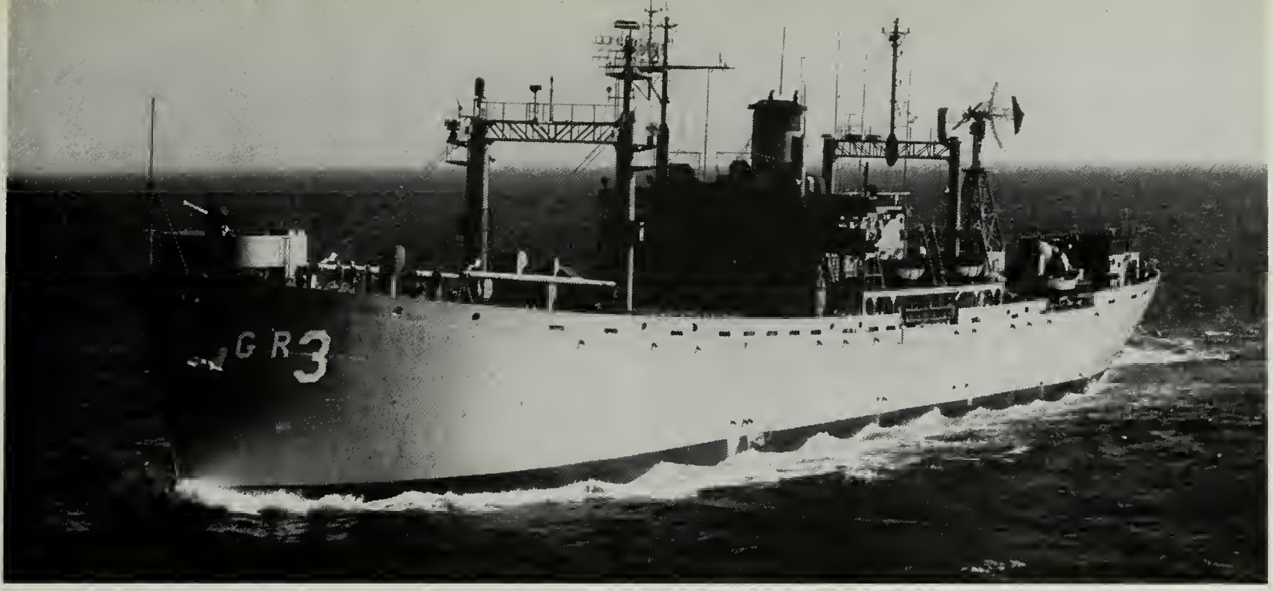
A YAGR has a complement of 15 officers and 168 enlisted men. Since the role of each ship is vital, and the duty on the monotonous side, much of the $3,500,000 that went into converting each was spent on "habitability."

All personnel are berthed above the waterline in spacious, well-ventilated quarters—probably the most "livable" afloat.

Each officer has his own private stateroom, and the old-type seaman's bunk has given way to three-quarter size "CPO" beds for all enlisted men. Each man has his own bed lamp.

Living space is alloted according to rate. Chiefs live one or two to a room; first class, four; second class, eight or ten, and the remainder sleep in roomy quarters in double-stacked beds. In enlisted quarters (one could

INFORMATION CENTERS on ocean radar station ships are in constant use. Shown below: the eyes and ears of a YAGR.



hardly call them "compartments") eye-pleasing, delicate shades of green and cream have replaced the traditional white paint on the bulkheads. Officers' staterooms are often paneled in mahogany or pine.

Long periods at sea aboard the YAGRs call for an intensive program of recreation and entertainment to ward off boredom, which could easily become a ship's most dangerous "bogey." Like most other ships, the YAGRs have night movies and a library, but their recreation programs go beyond those usual in Navy ships.

Standard with the YAGRs are hobby shops, disc-jockey programs, large lounges for crew, CPOs and officers, plus a gymnasium. The gym is a converted cargo hold, and usual facilities include mats for wrestling, boxing and weight-lifting, ping-pong and volley-ball equipment. Some YAGRs have extended the program to include archery, golf, badminton and handball.

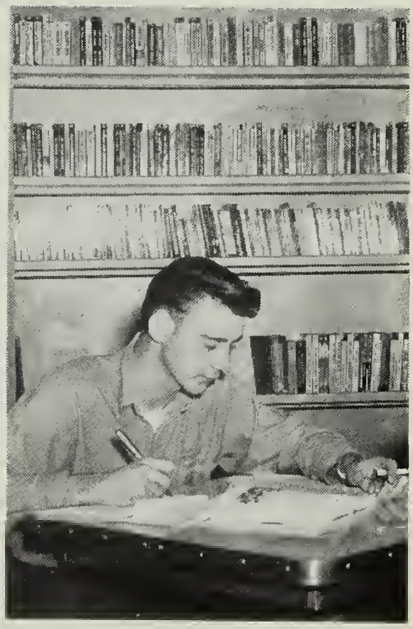
At least one of the YAGRs has a basketball court.

In addition to food comparable with the best in the Navy, the mess halls of the YAGRs would be the envy of any civilian cafeteria owner. The long tables and hard benches of old have been replaced by four-place dining tables and seats cushioned with foam rubber. On the serving line, crew members help themselves. After a meal they can light up a smoke, chat, and have an extra cup of coffee. Ashtrays and napkins are often standard equipment.

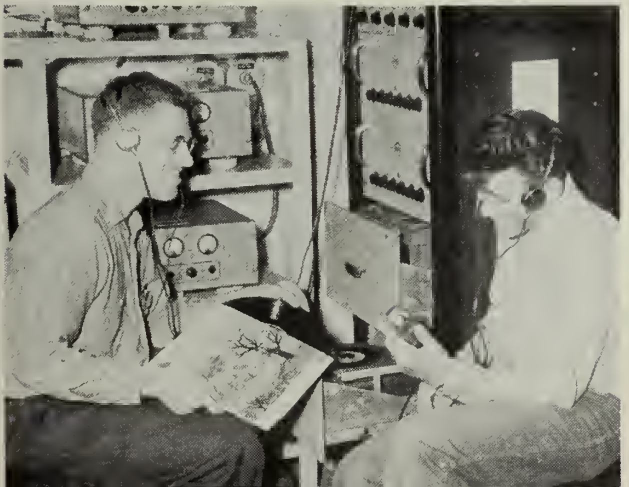
One thing that may puzzle Navymen who are familiar with these vital sea-going ships; why are the craft listed in a miscellaneous category? "YAGR," spelled out—"YAG" means a miscellaneous auxiliary and "R" stands for radar—points up the fact that this important ship is classified as a service craft.

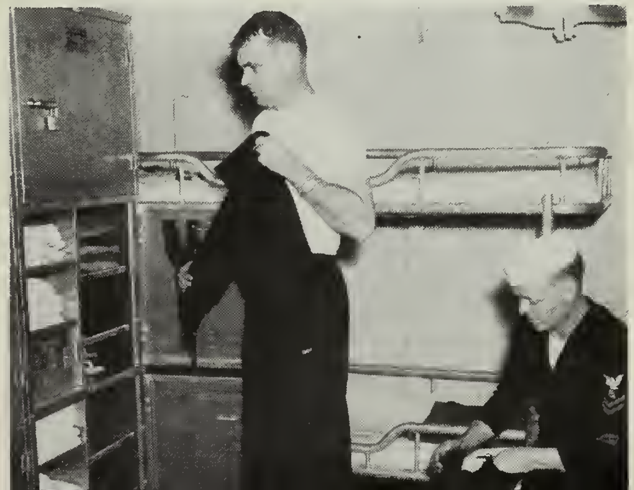
There' an answer: the ship is *supposed* to look about as miscellaneous as a ship can get. Inside, it's a different story—perhaps, one day, the most important story of watchfulness ever told.

—Haywood Mitchell, JO2, USN



QUARTERS aboard YAGRs are very livable. *Above:* Relaxed in 'library.' *Below left:* 'Disc jockeys' entertain crew. *Below rt:* Spacious living qtrs.

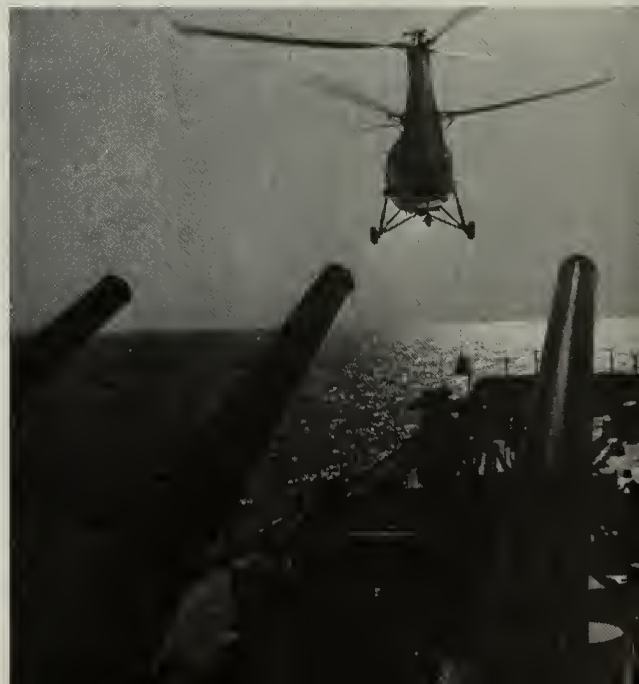




A Look at Navy Nigh

IT DOESN'T TAKE LONG after entering the Navy for a sailor to find out that he is a Navyman 24 hours a day. Night drills, watches, and exercises keep sailors at sea and ashore prepared to defend their country in darkness as well as daylight.

While at sea, ships sail around the clock and Navymen must be able to "see in the dark" to man their stations. This can be accomplished in two ways. First, by actually learning how to use your eyes better at night so as to make the most of what little light there is, and second, by knowing your job so well that you can literally do it blindfolded. Navymen learn this fast.



ife on the High Seas

Here are a few photos of ships at sea after sunset showing only a small bit of the Navy's night shift.

Top left: Quartermaster flashes message at night. *Top center:* Light patterns are made by plane landing on carrier during night operations. *Top right:* LSO in night gear directs plane in. *Right:* Night watch stands alert. *Lower right:* Gunners on board USS *Coral Sea* (CVA 43) hold night drill in Med. *Below:* USS *Canberra* (CAG 2) makes night passage. *Below left:* Evening mail is delivered by 'copter. *Far left:* Star shell fire lights up coast while destroyermen practice night firing. *Left center:* Night watch is pulled on the guns.

SecNav Gates Says—

Sea Service First Line of Defense in Atomic Age

The Honorable Thomas S. Gates, Jr., former Under Secretary of the Navy, who succeeded Charles S. Thomas as Secretary of the Navy in April this year, has been actively associated with the Navy since World War II, when he served on active duty from April 1942 to October 1945.

SecNav Gates

In 1943, he was assigned to USS Monterey *(CVL 26), serving in the Pacific about a year. He next took part in the Southern France invasion, then returned to the Pacific where he took part in the Philippine Liberation and the Iwo Jima and Okinawa campaigns. In December 1953 he was promoted to Captain, USNR, and placed on the retired list.*

Here are his views on questions concerning Navy policy:

On the Navy's readiness: "As usual the Navy is where the trouble is and is called on first when trouble is brewing. The Navy is an action service rather than an alerted service. If anyone must fight, we fight first, and the atomic age finds us as always the first line of defense."

On the carrier's concentration of power: "A *Forrestal*-class carrier can launch more explosive power than 50,000 CVAs of World War II."

On the sea-launched intermediate range missile: "An aircraft or missile with a range of 1700 miles can be launched from a selected point at sea and reach any land target on earth."

On the economic flexibility of the Navy: "The service of the future must . . . be the service of economy. A weapon which is truly flexible can be used to fight any kind of war—cold war, limited war, all-out war."

On the new look in national defense: "Modern sea forces are hidden, dispersed and mobile. The Nuclear Fleet will stay indefinitely at sea. They can carry the fight to the enemy, even if he attacks us at home first, by surprise. Any attack they attract can be dissipated at sea."

On the service of the future: "The *Nautilus*, which when combined with the advanced *Albacore* hull and armed with the guided or ballistic missile, with range, speed, strength, endurance and maneuverability, will give us a weapon system which approaches the ultimate as a weapon of deterrence or of retaliation."

On freedom of the seas: "The Free World cannot stand together if the U.S. Navy should be unable to insure freedom of the seas."

On new weapons: "The Navy is in the fore in the development of new weapons. . . . Nuclear power, supersonic speed, ballistic and guided missiles have set the stage for the golden age of sea power."

On public appreciation of the Navy: ". . . There (is) a national need for a deep and abiding appreciation of our Navy, its aims, its needs, its dynamic capability, and, most of all, its heart and spirit—within which lies a great capacity to preserve a peaceful world."

On control of the seas: "Control of seas means the capability to defeat enemy attacks by submarine, aircraft, surface ships, missiles, and any other kind of attack that might be launched against ships at sea."

On the Naval Reserve: ". . . Not only is a trained and ready Reserve necessary for the survival of our country and our way of life, but it is a source of great moral support to the regular operating forces and to our allies overseas."

On the mission of the Merchant Marine in National Defense: "It is difficult to conceive of the success of our strategical or tactical planning (for any nation's defense) without dependence upon the full integration of our merchant shipping resources. In the final analysis, strategy and tactics are the ultimate benefactors of the complexities of logistics which deliver 'the right man and the right material at the right place at the right time.' We must look to the Merchant Marine to make this delivery."

PREPARED FLEET—Freedom of the seas is maintained by an easily maneuverable and fast, power-packed Navy.

LETTERS TO THE EDITOR

This section is open to unofficial communications from within the naval service on matters of general interest. However, it is not intended to conflict in any way with Navy Regulations regarding the forwarding of official mail through channels, nor is it to substitute for the policy of obtaining information from local commands in all possible instances. Do not send postage or return envelopes. Sign full name and address. Address letter to Editor, ALL HANDS, Room 1809, Bureau of Naval Personnel, Navy Dept., Washington 25, D. C.

Submarine with Portholes?

SIR: Someone goofed! In your book supplement for April 1957 you said, "on 2 Nov 1944 USS *Salmon* (SS 182) arrived at Saipan and moored safe alongside USS *Fulton* (PG 49)."

At that time *PG 49 Fulton* was probably being sold as razor blades in the ship's store of *AS 11 Fulton* built in 1941 and still in commission. (I know because she's my ship.)

To make matters worse, on the same page you ran a picture of an officer of the deck looking through the portholes of a submarine rescue vessel and tried to pass it off as the picture of an OOD in a submarine.

However, it was interesting reading. —C. E. K., YNC (SS), USN.

- *Some days it just doesn't pay to get up in the morning, does it?*

PG 49 was launched in 1914 and sold in 1935. How we got her hull number on your ship we'll never know.

As for the picture, you've got us there too, even though we didn't come right out and say, "This photograph was taken in a submarine."

Maybe next time we'll be a little more leery of submarines with portholes—and we're going to try and stay clear of EEFs (Expert Error Finders) like you, too.—ED.

Official Word on Uniforms

SIR: Back in May 1955 you published a letter from R. L. C., who said:

"I have heard from pretty good sources that the Navy is going to switch back to the 13-button style pants and do away with the zipper front style. Can you tell me when?

"Also there is a rumor floating around that the Navy is considering the adoption of a uniform similar to the Marine Corps one. Could you give me any further information on this? Personally I like the uniform as it is, with button pants, and believe everyone else does."

In your reply, you wrote, "We don't know who your 'pretty good sources' are, but they are out of line in both respects. The zipper style trousers are here to stay . . ."

Hah. I think you owe R. L. C. an apology. Zipper style trousers are *not* here to stay. What say?—J. R. W., ET3, USCGR.

- *We say that when we got our information from the Uniform Board, it was the latest official word, and we still think it's best to go by that.*

True, the Navy has decided to make the 13 button-type trousers regulation when current stocks of the zipper jobs are worn out. But, how correct were R. L. C.'s informants on the matter of the Marine-style uniform?

No. The "pretty good sources" may luck into a hit once in awhile, but for long-term batting averages we'll take the official sources every time.—ED.

Well, He Was an Aviator

SIR: According to the short biography on CDR Ellyson (February 1957) which precedes the article "Elly May," the late commander must have been the youngest man to graduate from the Naval Academy. If my calculations are correct he was ten years old at the time of graduation. Was he? —C. V. T., CDR, USN.

- *Based on our dates your calculations would be correct; but the fact is our Editor-in-Charge-of-Statistics ran out of fingers when determining CDR Ellyson's age.*

The Navy's Biographical Section says that CDR Ellyson was born in 1855; graduated from the Naval Academy in 1905; and died in 1928, not 1938.—ED.

It's Getting Better All the Time

SIR: In "Taffrail Talk" of your January issue you imply that the Naval Research and Development Facility at Bayonne, N. J., is doing some needless boasting over its experiments with compressed flour aboard ship. You also imply that this space-saving item is nothing new, since the Navy has had compressed biscuits for many years. I have a few comments I would like to make on all this.

The Research and Development Facility at Bayonne is constantly seeking to improve methods of stowing and preparing provisions, so that the United States Navy will continue to be the best fed Navy in the World.

We realize that the Commissary Branch has made mistakes in the past (*i. e.*—its biscuits), but what depart-

'Big E' Headed for the Last Roundup

SIR: After reading several articles about the scrapping of USS *Enterprise* (CVS 6), I would like to enter this letter as protest in junking such a fine ship.

I served on board the *Big E* from 8 Jul 1941 to 13 Oct 1943. During this time I found her to be a very sturdy ship.

In view of the fact some of the CVEs are being used for antisubmarine work and for helicopter squadron rescue work, isn't it possible to use her as a CVA?—J. C. S., AM1, USN.

SIR: Could you kindly tell me the address of the Secretary-Treasurer of the USS Enterprise Association in order that I may contact him?

Secondly, could you give me definite information as to whether *Enterprise* has been actually sold for scrap?

I am amazed that the American public has so little interest in a ship that did so much to protect their interests during a most crucial period. —C. D. W.

- *For several years the Navy considered the establishment of* Enterprise *as a permanent World War II memorial. This idea was abandoned though, when the annual maintenance cost was established.*

To repair and modify this 20,000-ton carrier, which is outdated by new 60,000-ton carriers of the Forrestal *class, would be such a great financial undertaking that it makes such a task quite impractical. The ship was therefore ordered to be scrapped.*

It is quite evident that the American public has not forgotten the job performed by the Big E *during World War II. Recently an all-out drive conducted by the USS Enterprise Association has resulted in a stay of execution for the ship until 1 November.*

The Association is trying to raise the necessary funds to buy the carrier from the government. If the money is not raised by 1 November, she will be sold for scrap to the highest bidder of over one million dollars.

For further information concerning a Big E *fund, we suggest that you write to the President of the* USS *Enterprise Association, Mr. Bill Rubin, 3225 Bean St., San Diego, Calif.*—ED.

ment aboard a ship hasn't? The Research Laboratories are working constantly to try to alleviate mistakes of the past and develop the best methods of preparing and serving foods, and the Class "A-B" Schools are training personnel in the use of these methods.

No situation which has such a tremendous effect on the health and well-being of so many men should be spoken of lightly. The food service of the Navy is a great morale factor. It receives far too much criticism from uninformed sources. Therefore, those in a position to be informed should not be guilty of encouraging the uninformed.

The facility at Bayonne is always seeking to improve the Navy in the food field. And, if you doubt that there has been improvement, just take a look at the typical menus below:

USS Portsmouth—1894

Breakfast	Noon Meal	Evening Meal
Prunes	Plumduff	Crackerhash
Hardtack	Salthorse	Tea
Molasses	Hardtack	Hardtack
Coffee	Coffee	Molasses

Navy Transport—World War 1

Beef Stew	Pot Roast of Beef	Cold Corned Beef
Dumplings	Macaroni	Fried Potatoes
Fresh Fruit	Mashed Potatoes	Kidney Beans
Bread, Butter	Rice Pudding	Gingerbread
Coffee	Bread, Butter	Bread, Butter
	Coffee	Tea

Today's Navy

Chilled Grapefruit	Vegetable Soup	Spaghetti with Italian Sauce
Assorted Dry Cereal	Crackers	Meat Balls
Fresh Milk	Baked Sugar-Cured Ham	Diced, Buttered Carrots
Fried Eggs	Pineapple Sauce	Tossed Green Salad
Crisp Bacon	Candied Sweet Potatoes	Fruit Cocktail with Oatmeal Cookies
Cinnamon Rolls	Fresh Frozen Brussel Sprouts	Bread, Butter
Butter	Lettuce and Tomato Salad	Cocoa
Coffee	Ice Cream	
	Bread, Butter	
	Coffee	

Good food is a prerequisite to a happy ship. ("She isn't much on liberty, but man what a feeder.") Food at the Navy mess table is one of the Navy's greatest morale builders, and all commissarymen strive to serve the men of their ship palatable and well balanced rations. The development of the Navy's present-day general mess is a story that commissarymen can relate with justifiable pride — knowing that each meal that reaches the mess table is backed by the utmost in research and planning.

These results have been achieved through the teamwork and excellent functioning of the Navy Subsistence Office, the Research and Development Facility, the Commissarymen Schools, the Field Food Service Teams and all the commissarymen throughout the Navy. The Congress of the United States recognized the importance of this mission when it approved the Act of 2 Mar 1933, stating that experience had shown a Navy could function no more efficienctly than the health of the men would allow, and that the Food Service is responsible for this.

Come now, gentlemen, we can take a little ribbing once in awhile, but don't condemn us for our esprit de Supply Corps.—J. W. Medlin, CS1, USN.

● *Well, you certainly squelched us, didn't you?*

However, we're afraid even perfect squelches won't stop Navymen from making biting remarks at the hands

What Happened When USS Cyclops Disappeared 39 Years A

SIR: In the December 1956 issue of ALL HANDS (page 56) you refer to the disappearance of USS *Cyclops* as "the most baffling mystery in the annals of the Navy."

Perhaps so, but a possible solution is suggested in the December 1920 issue of the *U. S. Naval Institute Proceedings*. It sounds very plausible to me, and provides an explanation which may be of interest to your readers.—F. C. H., CDR, USNR.

● *Here is the article mentioned above, written by LCDR Mahlon S. Tisdale,* USN, *entitled "Did The Cyclops Turn Turtle?" appearing in the U. S. Naval Institute "Proceedings," December 1920. Excerpts are reprinted with permission of the copyright owners*.*—ED.

IN DECEMBER 1914, I was ordered to USS *Neptune* as a part of her commissioning complement. During the first few months after going into commission, considerable trouble was experienced in keeping the ship on an even keel—even when alongside the dock. This was attributed to the fact that she was built with athwartship double bottoms fitted with baffles, but in such a way as to permit water to move completely across the ship during a list or a roll. Running along the side of the ship immediately under the main deck were "topside tanks." These tanks, which extended outboard from the coaling hatches to the outer skin in an athwartship direction, had a sloping bottom which extended down some eight feet (estimated).

In the weather deck, on each side of the ship, was fitted a series of manhole plates each giving access to one topside tank. A considerable purchase could thus be obtained by filling topside tanks; and a slight list on one side would soon increase considerably due to the free water in the double bottoms which would, of course, immediately rush across the ship.

As *Cyclops* was similar in construction to *Neptune*, it is fair to assume that conditions of trim obtaining on one applied also to the other. I have seen *Neptune* flop 10 degrees for no apparent reason. If in so flopping something suddenly occurred to accentuate the list, such as the flooding of the topside tanks on the down side, it is reasonable to assume that this might have increased to such a degree as to cause the ship to turn turtle.

In the fall of 1916, when I was detailed to make a 10-day trip on *Cyclops* as communications officer, I

ONLY THE DEPTHS of the sea know the real fate of the USS Cyclops.

who feed them. As you are no doubt aware, griping about food is an old, old custom in the Navy, and often it's the guys who eat the most who gripe the loudest.

We realize the commissarymen must get pretty tired of all this, especially when they go out of their way to do a terrific job. But, if we stopped to pat you guys on the back every time you came up with something good, you'd all be laid up with sore backs and we wouldn't know where our next meal was coming from.

And then, brother, you would see some real griping!—Ed.

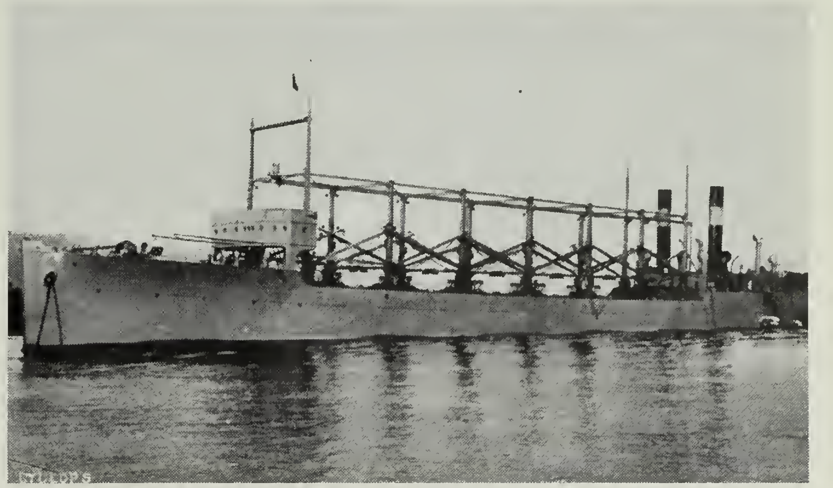
Officer Biography Sheets

Sir: Article B-2210 of *Bupers Manual* states that Officer Biography Sheets shall be submitted for officers with the rank of commander or above and for commanding officers, regardless of rank.

However some commands submit biographies on *all* officers. Is that correct?—J. A. H., YN1, usn.

- *Although it isn't necessary, it is acceptable for a command to submit biographies on officers other than those included in the article you cite. Therefore, it's more or less up to the command to decide how it wants to handle this matter.*—Ed.

rmer Crew Member Has a Solution



PERFECT DISAPPEARING ACT—*USS Cyclops*, a collier, shoved off on 16 Feb 1918. Despite long and exhaustive search she was never seen again.

had an experience which might offer further information concerning her disappearance.

On the afternoon of the second day it began to blow. *Cyclops* had only 1000 tons of coal distributed among her various cargo holds and was riding high out of the water. The wind worked itself into a gale and beat up a very rough sea. During the afternoon of the third day, conditions grew steadily worse. The captain asked me to remain on the bridge while he went aft for supper. Upon his return—this was the evening of the third day out—I fought my way aft, wrapped myself around a stanchion, hurriedly ate a sandwich or two, and started back to the bridge.

As I came abreast the manhole plate for the starboard after topside tank, I was thrown to the main deck by the action of the ship. I landed near the topside tank manhole and my attention was at once caught by the fact that the plate was not secured. I slid the plate into position as best I could with one hand—I was carrying a signal code book—and set up the central screw finger-tight, thinking all the while I worked how fortunate it was that I had served on *Neptune* and had learned the value of keeping tank tops tight. On starting forward again I was astonished to find that the next plate was also cast off. Upon looking further, all plates seemed to be adrift.

Deciding that securing all of them was too much of a job with one hand, I worked my way to the bridge and reported to the captain that someone had opened all the topside tanks.

He laughed at my earnestness and said that they were *always left off* in accordance with instructions from the navy yard!

Now consider the situation faced by *Cyclops* when she was lost. She was carrying manganese ore. Due to the great weight per cubic foot of this ore as compared to coal, it is probable that her cargo holds were loaded by weight and not by volume and were therefore far from full. Perhaps the cargo was braced to prevent shifting, but this would have required very strong braces, far beyond the capacity of the ship's carpenter. Unless these braces were installed at the loading port they were probably not installed at all. At this point, the matter sizes up as follows:

The ship was heavily loaded and hence deep in the water with a correspondingly small freeboard, but her holds were not full by volume.

It was customary to leave the manhole plates off topside tanks according to the statement of the captain. (She had the same captain when I made my cruise on her as when she was lost.)

In any sort of a storm it was always customary in the colliers, due to their liveliness and to their great amount of top hamper, to secure *everything* for sea.

It is plausible to assume that the cargo may have shifted, perhaps only a little, but enough to increase the average list sufficiently to cause the free water in the double bottoms to rush toward the down side thus further increasing the list. Suppose the heavily laden *Cyclops* now shipped a sea. Wouldn't this give the ship a tendency to capsize?

This could all occur in a few seconds and the ship would be bottom up before anyone could abandon ship. Some few men from the bridge and poop might have been thrown clear of the wreckage. Remember that there would be nothing adrift except such gear as would be free to float off during the few seconds during the turn. There would be no debris such as always follows a sinking due to any other type of marine casualty.

There would have been no time for anything. The few men in the water could not have lived long of their own accord. Such small gear as did float off would have been lost in the vastness of the ocean long before the rescue vessels started their search.

On 9 Jan 1918, uss *Cyclops had been detached from the Train of the Atlantic Fleet and assigned to the Naval Overseas Transportation Service. After departing from Hampton Roads she headed for Bahia, Brazil, reaching there on 22 January. Loading up with manganese ore she took off to Rio, then stopped at Barbados, B.W.I. On 4 March she left that port and sailed for Baltimore, Md., where she was due on 13 March. Neither* Cyclops, *nor her 309 crew members and passengers were ever seen again, nor was any sign of wreckage ever located.* Cyclops *just vanished. The above account may be the story of what really happened.*—Ed.

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Ship Reunions

News of reunions of ships and organizations will be carried in this column from time to time. In planning a reunion, best results will be obtained by notifying the Editor, All Hands Magazine, Room 1809, Bureau of Naval Personnel, Navy Department, Washington 25, D. C., four or more months in advance.

- USS *Gleaves (DD 423)*—The fifth reunion for all former crew members will be held on 26 October at the Park Sheraton Hotel, New York, N. Y. For further information, contact Frank J. Calzaretta, 12 Sanford Pl., Jersey City, N. J.
- *19th Naval Construction Battalion*—The ninth annual reunion will be held in New York, N. Y., on 20, 21 and 22 September. Additional information may be obtained by contacting Herbert McCallen, 665 East 14th St., New York 9, N. Y.
- *82d Seabees—519 CBMU*—The 11th annual reunion will be held at the Hotel Providence Biltmore, Providence, R. I., on 20, 21 and 22 September. For details, write to James Greenwood, 147 Bathurst Ave., North Arlington, N. J.
- USS *Barnes (CVE 20 now CVHE 20)*—All former crew members who served in this ship from 1943 until August 1946 interested in a reunion, contact Chuck Keyer, P.O. Box 483, Oakland, Calif., or John Batanides, 1763 Lombard St., San Francisco, Calif.
- USS *Columbia (CL 56)*—All shipmates who served on board during World War II interested in a reunion, with time and place to be decided by mutual consent, may contact Thomas F. Kelly, Superintendent of Schools, 614 South St., Avoca 1, Penna.
- USS *William D. Porter (DD 579)*—A reunion has been proposed for former crew members to be held in Miami, Fla., during the month of January. The exact time and place will be determined by mutual consent. Interested shipmates may write to H. Seward Lewis, 1442 NW 7 Court, Miami 36, Fla.

Wetting Down

SIR: Recently my husband was given a "wetting down" party in honor of his promotion. Since that time I have made several inquiries as to the origin of this custom. Needless to say I have been unable to find any information. Can you help me?—Mrs. G.G.D.

- *No one seems to know just how or when it started. Several of the old-timers we asked seem to think the name was suggested by the launching ceremony, the wetting of the bow of a new ship with wine or water.*

The idea, strangely enough, was carried over to the promotion of a Navyman who finds himself facing new responsibilities. It is usually a party given for or by a newly-promoted officer or petty officer.—ED.

Navy Track Team

SIR: I am quite interested in getting on a Navy track team. Could you please tell me how I can qualify for such a team?—J. A. R. SN, USN.

- *Normally the only time a track team is sponsored by the Navy is during the years when the Olympics and Pan-American games are held.*

You will find that very few naval stations sponsor track and field teams. The majority of stations do, however, have facilities for personnel to keep in training during their off-duty hours.

If you are really good—good enough to make the National Championships, you may have a chance to enter National and International events.

Complete information can be found in BuPers Inst. 1710.2.—ED.

Still No. 1 Degaussing Crew

SIR: In the December issue of ALL HANDS you published a letter from a crew member of USS *Ampere* (ADG 11). This declared *Ampere* to be the only degaussing ship then in commission. Apparently the light this letter shed helped to bring about the development of an effective degaussing ship capable of supporting the new minesweepers and meet other new requirements, an event we in *Ampere* had been working toward for a long time.

Ampere, although good for her day, had reached beyond her limit. At the same time, new developments had caused the 220-foot MSFs to be placed out of commission as minesweepers. The MSF met every requirement we needed in a degaussing ship. We asked for one—and we got it.

Early last spring USS *Surfbird* (MSF 383) moored alongside *Ampere* in Sasebo, Japan. All officers and crew of *Ampere*, complete with degaussing equipment, moved on board *Surfbird*, and all officers and crew of *Surfbird* moved on board *Ampere*. Two days later, exchange of command and function ceremony took place, and the former *Surfbird* crew sailed *Ampere* away and placed her out of commission.

In other words, the former *Ampere* crew is now operating on board USS *Surfbird* (ADG 383), which is still the only degaussing ship in the Navy.—Dan Hall, ENS, USNR.

- *Thanks for the word. If we ever need any degaussing done, we'll know where to apply.*—ED.

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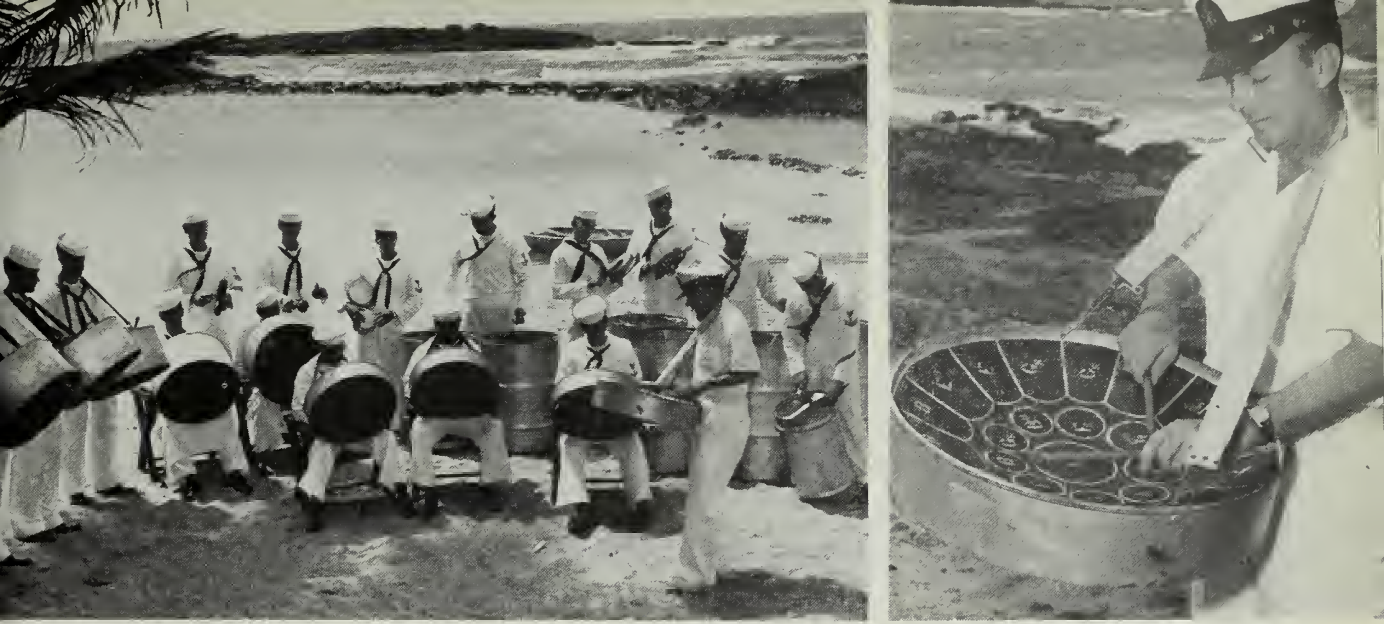


'STEELING' THE SHOW—Tenth Naval District steel drum band steals the show wherever they play. *Right:* Chief's touch.

Navy Music-Makers Play to Beat the Band with Oil Drums

Sir: We are conducting a musical experiment down here in San Juan which I think might interest you.

A few months back, while I was in Trinidad, I had my first chance to hear steel drum band music. It impressed me so much that I immediately ordered a set of 16 steel drums for my 10th Naval District Band.

Before my trip to Trinidad I had never heard of a steel drum, let alone an entire band. I expect that very few people in the U.S. have heard this type of music, or are familiar with the instruments used in this strange ensemble.

A steel drum is simply a discarded 55-gallon oil drum with various areas bunged out on its head which will produce notes of different pitch when hit with a rubber headed stick. If you cut the skirt short you get a so-called ping pong drum which has a soprano or treble range of two octaves.

By making the skirt a little longer you get a second pan with the range of the alto voice. As the skirt gets longer you get guitar drums, tune booms, and the bass, the latter using the whole drum with only the bottom of the old oil drum removed.

NAVYMEN made drums in Trinidad.

A bass can produce only five notes per drum. Our band has four of these, which cover almost an octave of the bass range among them. All the drums are made on the waterfront at Trinidad through a trial and error system. I'm sure the people who make these instruments have never heard of any of the laws of physics and know nothing about formal music, but the rhythm and tone they get from these drums is out of this world.

Not long ago members of the band down in Trinidad picked up our new instruments. It was the first time any of the band members had ever seen a steel drum and they had but a week to learn all they could about them.

The Trinidad experts scoffed at the idea that they could learn anything in just one week. They said "Stay with us for three months working every day. Maybe by that time, you will begin to get the feel of it." Just before the band had to return to San Juan they had some of the experts out to hear their last rehearsal. The experts were amazed at the band's progress but one of them explained by saying: "Well, no wonder. You guys read music."

With no more than 10 days' experience behind them, the band had its premiere at the Navy Relief Carnival—and stole the show. They had the joint literally jumping. However, so far their repertoire is quite limited. They can beat out simple Trinidad tunes plus a few military songs and marches.

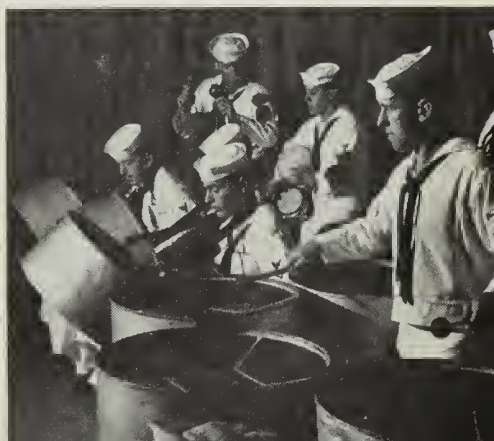
The bandsmen have gone all out for the new drums. They tried to talk me into letting them raffle off their regular instruments at the Carnival and play nothing but steel drums from now on, but I didn't think the auditors would care very much for this bright idea.

I believe this idea has a terrific future and that one of these days steel band music will sweep the country. Trinidad really started something.—D. V. Gallery, RADM, USN.

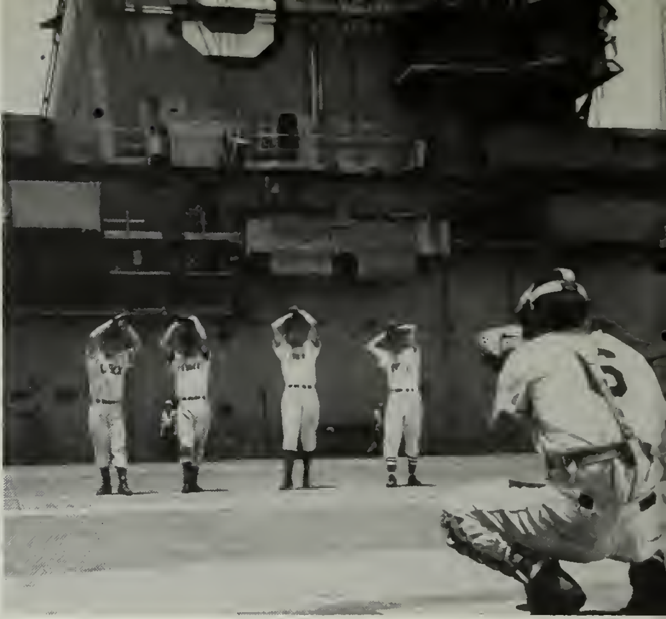
One further thought—There are some recordings available of this type of music but they do not give you an idea of the real thing. They haven't learned yet how to record this stuff without losing most of its effect.—D. V. G.

- *Dear Admiral: You have just about wrecked the morale of this office. Most of our journalists have been trying to talk us into sending them down to Trinidad to do a little personal research on this phenomenon and can't properly understand our position when we explain that this is the type of story that would require our personal attention. However, one of our eager beavers is disillusioned about the whole idea. A do-it-yourselfer at heart, he cumshawed an oil drum and tried to cut out the top according to your directions. At present, he has a number of unhappy neighbors, a sore thumb, several blisters and a decided antipathy toward musical instruments of all kinds.*—Ed.

DRUM techniaue came from natives.



FAMILY FUN



SPORTS

Special Services Help You to—

HAVE A GOOD TIME

No matter who you are or what you do, you must have *some* free time on your hands. If you don't know what to do with it, the Navy, through its Special Services Program, will help you.

You'll find at your disposal—to help you enjoy your off-duty hours—recreation buildings and theaters, libraries and writing rooms, lounges and gymnasiums, hobby shops with arts and crafts rooms, officer and CPO messes and EM clubs, game and music rooms, movies, canteens and snack bars. There are also athletic fields and courts; picnic areas; swimming pools and beaches; rifle, pistol and skeet ranges; boating and fishing areas; and golf courses.

You won't find all of these activities at each one of your duty locations but you will find many at almost any of them. Aboard ship, there are a number of facilities available for your leisure-hour activities. Ships have libraries, show movies, maintain hobby shops, have some sort of shipboard recreation program and sponsor intramural or "varsity" athletics.

Fleet Recreation Centers

At the larger naval bases where a number of ships are home-ported or frequently visit during operations, the Navy maintains Fleet Recreation Centers. These activities usually offer all of the facilities mentioned above, as well as planned programs and leadership for the relaxation and off-duty enjoyment of Fleet personnel.

Fleet Recreation Centers are located at Yokosuka and Sasebo, Japan; Sangley Point in the Philippines; Pearl Harbor, San Diego, Norfolk and Guantanamo Bay, Cuba. Then you have Sailor's Field at Boston and a new $500,000 recreation center being planned for Newport, R. I.

Typical of these Fleet Recreation Centers is the McCormick Sports Center at Norfolk. Housed in a huge, red-brick building adjacent to the waterfront piers, the ultramodern center contains a gymnasium with a 2000-person seating capacity, a special practice gymnasium, an eight-lane bowling alley equipped with semi-automatic pin setters, a pool room, Navy Exchange, barber shop, snack bar, patio and lounge.

The sports center at Norfolk, which is similar to Sailor's Field at Boston, also has an outdoor sports area complete with lighted baseball and softball diamonds, basketball, badminton, volley ball, shuffleboard and handball courts.

In addition, there's the Fleet Recreation Park which is right across the street from the McCormick Sports Center. This activity has both outdoor and indoor swimming pools, two baseball diamonds, eight softball fields, a gymnasium, picnic areas, an Exchange and a snack bar. Adjacent to all this, is the Fleet Social Recreation Center, used for dances, ship's parties and other forms of social recreation.

All of these activities are an ac-

SHOW TIME—Special Services helps Navymen enjoy their off duty hours in many different ways including shows and parties like the one shown here.

cepted part of the Navy way of life. They are provided for you under the Navy's Special Services Program. Like most other matters dealing with morale, Special Services is supervised and administered by the Chief of Naval Personnel. The over-all program covers all echelons from the Bureau of Naval Personnel down to the table tennis equipment in your rec room or the book you just checked out of your ship's library.

Your leisure time activities are important to the Navy—so much in fact, that they are planned and executed like a big business. In the Bureau of Naval Personnel, six different branches handle nothing but matters pertaining to Special Services. Then there are offices on the District and Fleet levels, as well as aboard your individual ship or station. All of these activities handle matters ranging from movies to libraries, EM clubs to hobby shops, all types of sports and the Navy's music program.

HOBBIES

LEISURE HOURS

Movies

Movies are by far the largest single item in the Navy's recreation budget. Regardless of size, almost every activity in the Navy, afloat and ashore, has provisions for showing movies, and no matter where you are, you usually have the opportunity to see a different movie every night.

You'll even find movies—and wide screen ones at that—aboard submarines. USS *Nautilus*, SS(N) 571, for example, shows wide screen movies in the crew's mess hall. *Nautilus* boasts the smallest "giant" screen in the country. It's a special screen, measuring six feet, 10 inches wide and two feet, 10 inches high.

Providing movies for *Nautilus* and hundreds of other ships and stations poses some knotty logistic problems. Under present arrangements 16-mm. movies, TV kinescopes and special short subjects are procured by the Navy Motion Picture Service. These movies are shown to you aboard ship and at overseas stations without charge but they cost the Navy more than three million dollars per year.

If you are based ashore in the continental U.S., or in Hawaii, your movies are provided under the Navy-Marine Corps Motion Picture Plan. These are 35-mm. films which are leased by the District Commandants from civilian motion picture exchanges. If you attend a movie which procures film under this plan, you will be charged a moderate admission fee to cover part of the rental cost of these films.

Besides movies, there is plenty of "do-it-yourself" entertainment available. Music, dramatics and other theatrical fun offer a challenge to a great number of Navymen. These activities can be as informal as a ship's "Happy Hour," or an on-the-spot songfest at one of the clubs, yet as big as a Broadway stage show or an All-Navy talent contest.

Other than shows utilizing Navy talent, you often have the chance to see top stars of stage, movies, radio and TV perform right aboard your own ship or station. It's a common practice for many big name stars and bands to give their time and talent to entertain Navymen.

On the other hand, if you are a seagoing sailor, you'll have the opportunity to see some of the world's best plays, musical shows, operas, concerts and other entertaining events in your travels around the world, as well as in the larger port cities of the U.S.

Sports

The Navy Sports Program, like all other recreational functions, is set up on a voluntary off-duty basis, and is designed solely for you. If you take an active part in some sport, you'll make good use of your idle hours as they enable you to get your daily exercise and at the same time maintain the physical fitness expected of all Navymen.

Here's a partial list of the sports in which you can take part: baseball, softball, football, basketball, swimming and diving, tennis, track and field, golf, bowling, table tennis, volleyball, badminton, hunting, fishing, boxing and wrestling.

Some of these, of course, will depend upon where you are stationed. Even if you are aboard ship, you can still take advantage of many of them. With certain changes to the basic rules, a number of sports can be adopted for shipboard use. The January 1953 issue of ALL HANDS had an article (pages 31-37) dealing with this and gave revised rules for

IN THE SWIM—Pools such as this Fleet-size job at Yokosuka in Japan are built and run as Special Services projects.

more than 20 popular sports adopted for shipboard play. Among them were such "salty" games as tin can basketball, seashore shoes, mess table tennis, anchor ball, fantail fishing, crow's nest wrestling and Navy bean bowling.

Even if it's tin can basketball or the more familiar version, you will, at one time or another, have a chance to compete on any level you wish, or at any level at which you can qualify. Perhaps you are interested in "sandlot" competition—or maybe you are good enough to meet some of the best in the Navy and in the other branches of the armed forces.

Almost every ship conducts intramural leagues and often enters teams in intra-district, intra-area and intertype competition. Then there's the All-Navy and Inter-Service Programs, where you will find real top competition with some of the best athletes in the world.

OVERSEAS FUN—Whitehats enjoy miniature golf at Atsugi sports center.

As you probably know, Navy athletes and teams also have the opportunity, whenever possible, to meet local school, college and other teams. In addition, the Navy encourages qualified athletes to apply for competition in almost all of the various national meets, as well as the Pan-American and Olympic Games. Last year, for example, 16 Navymen participated in the Olympic Games at Melbourne, Australia, and eight of them won championship medals. Among them was Seaman Milt Campbell, the winner of the decathlon, who was acclaimed as one of the outstanding heroes of the Games.

Next to actually playing, you can of course watch and root for your home team. You'll find plenty of opportunity for this in Navy sports. You will be able to get tickets (often free or at reduced rates) to many professional athletic events at cities near your station or home port.

Libraries

If you enjoy an occasional hour or two with a good book or magazine—or if you're a more serious reader—you will find a Navy library wherever you are stationed. The library aboard your ship or station, regardless of its size, will provide you with a good selection of fact and fiction, adventure stories, travel books, science, sports stories, history, biography, and in some cases the latest magazines and more popular newspapers.

Although the Navy's Library Services Program comes under Special Services, its operation is somewhat different from all other Special Services functions. This is because your ship or station library is not intended to be limited to off-duty use such

IT'S A BALL—Navymen throughout the Fleet have a great time at dances like this one taking place at ship's pier.

as movies, sports, EM clubs and other recreational activities.

Whether you know it or not, your ship or station library provides you with a certain amount of professional and technical books which are required in connection with your day to day work, as well as fiction and other types of books for recreational reading. All Navy libraries are also stocked with information and reference books which supplement those made available to your through the Navy's education and training program.

The majority of books in your ship or station library are supplied by the Library Services Branch of the Special Services Division of this Bureau. These books are paid for out of appropriated funds. Each activity gets an initial allowance of books at the time of commissioning and additional shipments periodically thereafter. Magazines and newspapers, however, are not provided by the Bureau. They must be procured and paid for out of your own ship or station's (non-appropriated) recreation fund.

In order to provide maximum service, the Library Services Branch tailors the book collections of your ship or station to its actual needs. The number of books and titles vary from one library to another. There is no standardized set of books forwarded to every ship or station. Collections range from a few books aboard small ships to as many as 60,000 volumes or more at large shore-based activities. The personnel strength of your ship or station determines the number of books your library will be allotted. Shore stations, on the average, rate two books per man, while space limitations aboard ship restrict the number to three books for every two men. These numbers, however, are often altered with the ratio of books being lowered or increased in such cases as extreme space restrictions, degree of isolation of the unit and type of duty assigned.

Men in small ships, like submarines for instance, are likely to read a great deal since other off-duty activities are limited. Hospitalized personnel form another group in need of much reading material.

Hobby Crafts

If you have a hobby or want to develop one, you'll usually find the help and equipment you need at most ships or stations. Included in the Navy-wide hobby craft program are 37 different hobbies. Model building, carpentry, leather craft, painting, and photography are but a few of the more popular ones.

Naturally, you won't find all of

IN THE ACT—Sailors relax at Special Services staged play in the Far East.

IN ADDITION to pools Special Services maintains many facilities at beaches and *(Rt)* supplies hobby shops.

them aboard any one ship or station. You will be surprised, however, at the wide-range offered at even the smallest ship or station. More than 20 of the 37 hobbies supported by the Navy's hobby craft program are recommended for shipboard use.

In recent months, the Naval Communciation Station at Barrigada, Guam, joined the growing ranks of naval activities which offer hobby shops as part of their recreational program. Utilizing an old sick bay and dispensary, the Barrigada hobby shop contains a "ham" radio shack, separate photo developing and printing rooms, electronics shop, a music room equipped with a three-speed turntable and amplifier system and several craft rooms.

One of the Navy's larger and busier hobby shops is located at NTC San Diego. It offers free instructions, locker space and use of tools and equipment in eight different sections—radio, model making, art and photo lab, jewelry cutting and polishing, ceramics, leather craft and carpentry.

Navy Clubs

In addition to movies, sports, libraries and hobby shops, you will find both officer and CPO messes and EM clubs at shore installations throughout the Navy. The officer messes are maintained for the purpose of providing lodging, dining and recreational facilities while the CPO and enlisted clubs serve the same purpose except that they do not provide lodging facilities. You'll find officer and enlisted clubs at almost every shore station.

Recently the Chief of Naval Personnel authorized shore stations to establish PO1 and PO2 clubs with privileges equivalent to those enjoyed by non-coms of the other services. The Naval Station at San Diego claims to be the first naval activity to be authorized and to open a First and Second Class Petty Officer Mess. It opened its doors on 15 Mar 1957 to an overflowing crowd of 3500. NAS Oceana at Virginia Beach, Va., is said to have the Navy's second "acey-deucy" club.

No matter whether first or second, no one will dispute the title that goes with the fabulous Enlisted Men's Club at Yokosuka, Japan—"the largest, most colorful whitehat's club in the World!" This club takes in almost two million dollars a year and has catered to as many as 25,000 persons in one day. It even features, among many things, free judo lessons, hair cuts, shoe shines, and three shows daily in its 1000-seat theater.

SMOOTH SAILING — Wooden disk leaves end of EM's shovel and is on target in tight game of shuffleboard.

To round out the many Special Services activities, you also have your ship and station newspapers and ALL HANDS which are published for you as part of the Navy's Sports and Recreational Program. While your ship or station paper gives the word on local happenings, ALL HANDS covers matters of Navy-wide interest. It's published by the Informational Services Branch of the Bureau of Naval Personnel's Special Services Division.

ALL HANDS attempts to keep you informed on the over-all happenings of the Navy as well as give you the latest word on new training and advancement opportunities, stories with a historical slant, information about the other branches of the armed forces, and even answers to questions sent in by you and your shipmates.

It is distributed on the basis of one copy for every 10 Navymen. You may, however, purchase your own personal copy or even have a subscription mailed to your homefolk so they may get an all-around picture of Navy life and see how you work and play.

On the following pages you will get an idea of how the sports and recreation program operates ashore and afloat.

—H. George Baker, JOC, USN.

NAVY FUN TIME—Floor show at Sea 'n' Shore brings forth laughs. *Right:* Sailors enjoy Friday night dance at club.

Here's a Sample of How Sailors in 11th ND Enjoy Life

SHORE-BASED ACTIVITIES within the 11th Naval District have established a Social Recreation Program to supplement that already offered through the Navy's regular Sports and Recreation Program.

It includes a variety of activities, for enlisted men and their dependents, both on and off the stations. This plan also takes advantage of community resources.

Full-time civilian "Navy Social Recreation Directors" have been appointed to handle the new Social Recreation Program with the 11th Naval District. Already programs are in full swing at the Naval Ordnance Test Station at China Lake; the Naval Station, Long Beach; the Naval Auxiliary Air Stations at Brown Field and El Centro; the Naval Communications Station at Imperial Beach; and the Naval Administrative Unit, Lake Mead, Las Vegas, Nev.

The new plan was put into effect in March 1956 by the Commandant of the 11th Naval District who felt that "profitable and wholesome use of leisure time is vitally important to all hands and has a direct bearing on efficiency of performance and on reenlistment rates."

The civilian recreation directors work in Special Services and plan, coordinate and assist in developing recreational programs to supplement existing Special Services functions.

A recreational director was assigned to the U. S. Naval Station at Long Beach early in 1956. The immediate response and results of the social recreational program surpassed all expectations. Recently organized social recreational functions include a ski club, stamp and camera clubs, hobby groups, swimming and bowling parties, talent shows, and guided tours of such places as Disneyland, Laguna Beach, San Juan Capistrano and Hollywood—including visits to movie studios, Television City and Beverly Hills.

Center of all social activity for the Long Beach bluejackets is the Sea 'n' Shore Recreation Center which is located in Bldg. 71 at Terminal Island. Facilities offered there since its opening in February include a modernistic, hotel-type lounge; a snack bar, game room, color TV lounge, hobby workshops and a dance hall.

The Sea 'n' Shore offers a full schedule of entertainment each month. A quick glance at one of its monthly calendars of events reveals there are square dances every Monday evening and formal ballroom-type affairs on the second and fourth Friday of each month. Bingo, jazz night, table tennis tournaments, floor shows featuring top stars of the movies, radio, stage and TV, western bands, dance lessons, and other attractions are featured.

To supplement the Sea 'n' Shore activities, the Naval Station at Long Beach publishes a 40-page guide which contains all the latest information on recreation and other facilities aboard the station and in the general area. This pamphlet is prepared by the Social Recreation Director and is given to all personnel when they report aboard for duty.

PLENTY DOING—Visitor from movieland sings at show with sailor. *Top Right:* Square dance club poses. *Lower Right:* Weekly jazz session swings out.

D. White, PN1

G. Maldonado, YN2

H. E. Kehr, MU3

All-Navy Talent Team

D. Wyatt, AN

R. Sparks, SN

A GROUP OF SAILORS and Waves is returning to their individual ships and stations throughout the world this month after completing a cross-country tour with "Shipmate Varieties," an All-Navy revue that took them to 45 cities in 37 different states in 51 days.

Sponsored by the Navy's Recruiting Service, "Shipmate Varieties" featured the finalists in the recent All-Navy Talent Contest. It is estimated that the Navy performers were seen by some five million persons during their national tour. (This does not include the many millions who viewed them when they appeared on the Ed Sullivan Show.)

The tops in Navy talent starred 19 Navymen in 16 acts ranging from operatic tenors to unicyclists. It offered something to please every taste, from rock 'n' roll to classical music, plus comedians, dancers and jugglers.

The Navy entertainers were selected by a board of professional showmen, producers, directors, musicians and naval officers, from the finalists of the All-Navy Talent Contest. They were accompanied on their cross-country tour by 16 members of the U. S. Navy orchestra, under the direction of Chief Musician Richard E. Larson, USN. The producer of Shipmate Varieties and tour director was LCDR H. Harold Bishop, USNR, head of the Special Projects Division of the Navy Recruiting Service.

Seven of the 19 performers featured in the recruiting tour had appeared on the nation-wide TV show on 12 May. Among them was Donald R. Wyatt, AN, USN, from NAS North Island, whose vocal solos had audiences across the nation calling him back for more. The personable, 23-year old blond was even more pleasing with several impersonations.

Making his second appearance in the All-Navy finals and the nation-wide recruiting tour was Randy Sparks, a 21-year old seaman currently assigned to the aircraft carrier USS *Princeton* (CVS 37). A well known calypso singer, he has a recording contract and appeared professionally in night clubs, radio and TV before entering the Navy.

William Hrynkiw, MU2, USN, of NTC Great Lakes, made a big hit with his accordion playing, while Tim Johnson, YNSN, USN, of ComServPac, kept the crowds happy with his vocal renditions of "Round and Round" and other current hits.

Hrynkiw and Johnson were also on the TV Navy talent show, as were electric guitar soloist, Ralph Grasso, EN3, USN, of the Naval Receiving Station at Brooklyn, N. Y., (he played with Les Paul and Mary Ford before entering the Navy); and op-

B. Hrynkiw, MU2

A. Blaesing, SN

T. Kelly, PR3

ig Hit on National Tour

eratic tenor Mike Driscoll, a seaman from NTC Bainbridge, who brought heavy applause at every point of the tour.

Plenty of rock-and-roll was on the bill as Harry E. Kehr, MU3, USN, of NTC Great Lakes, kept audiences alive with his guitar and banjo. He teamed up with accordionist Hrynkiw to stop the show, and in every performance was called back again and again.

The three Waves in the talent review were Loni Mass, HM3, USN, a blues singer assigned to the Pearl Harbor headquarters of FMFPac; Seaman Pat Duval, USN, a Western-style singer from the Fourth Naval District Intelligence Office, and Janice Rich, DTSN, USN, a pantomimist, from NTC Bainbridge. Miss Mass placed third in the All-Navy finals.

The Mallet Men, Dale Barrett, MU3, USN, and James Ward, MU2, USN, both from NTC Great Lakes—the second place winners in the All-Navy Talent Contest—teamed up for a marimba duet; and Ted Kelly, PR3, USN, fast and fancy-stepping tap dancer from NAAS, Whiting Field at Milton, Fla., were also among the stand-outs.

Other top-notch performers:

- Richard Bain, MU1, USN, a featured harmonica soloist with the official U. S. Navy Band in Washington, D. C. Before entering the Navy he was a member of the Fred Waring Band and appeared on numerous radio and TV shows.
- Allan Blaesing, SN, USN, unicyclist and juggler, attached to the Staff, Commander Destroyer Squadron Six, on board USS *Cone* (DD866).
- Charles A. Weinrott, JOSN, USN, comic and Master of Ceremonies, who is assigned to the staff of the Commandant, 13th Naval District. Before entering the Navy he was with the national network radio shows, "Those Websters," "Henry Aldrich" and "The Brewster Boy."
- Danny White, PN1, USN, country and western singer, who is assigned to Fleet Aircraft Service Squadron Ten, Moffett Field, Calif. He was an All-Navy finalist in 1956 and also toured the country last year with the Navy Talent Revue.
- George Maldonado, YN2, USN, pops singer, presently serving at the Naval Air Station, Norfolk, Va.

The national recruiting tour meant a lot of hard work and long hours for these Navy entertainers. As they whistle-stopped back and forth across the country they were performing night and day. In so doing, the Navy acts provided a tremendous stimulant for Navy recruiting and at the same time they accomplished an outstanding public relations job for the Navy.

L. Mass, HM3

R. Larson, MUC

Sports and Recrea

SPORTS and GAMES

Have you lost your mumble-ty-peg touch? Is your yo-yo rusty? Despair not! See your Special Services Officer.

afloat

The only limits are lack of space and imagination . . .

ashore

What can be played at sea, can be played ashore, plus . . . . .

HOBBY CRAFT

Unusual gifts for family and friends can be a gratifying product of your "do-it-yourself" urge.

afloat

Ship's facilities and Navy hobby manuals can start you off . . .

ON STAGE

Dig out old talent! Encourage new! Even if you have never acted, sung, danced, juggled or joked . . . try it! The crowd is with you.

64,000 DAYS OF LIBERTY QUIZ
BLOODY MARY IS THE GIRL I LOVE
VARIETY SHOWS & TALENT CONTESTS
MUSICAL COMEDY

MU

Listening to c
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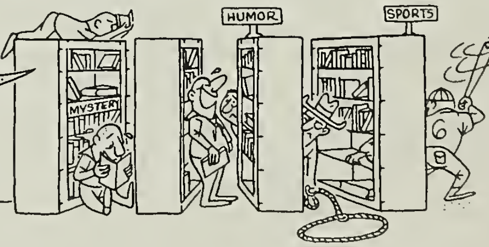
LIBRARY

Here's a treasure house of relaxation and research. Ask for more know-how-to-do-it books. The library is yours.



SOCIAL

Get interested in what other p
like and they'll get interested i
Find out what makes their hobby

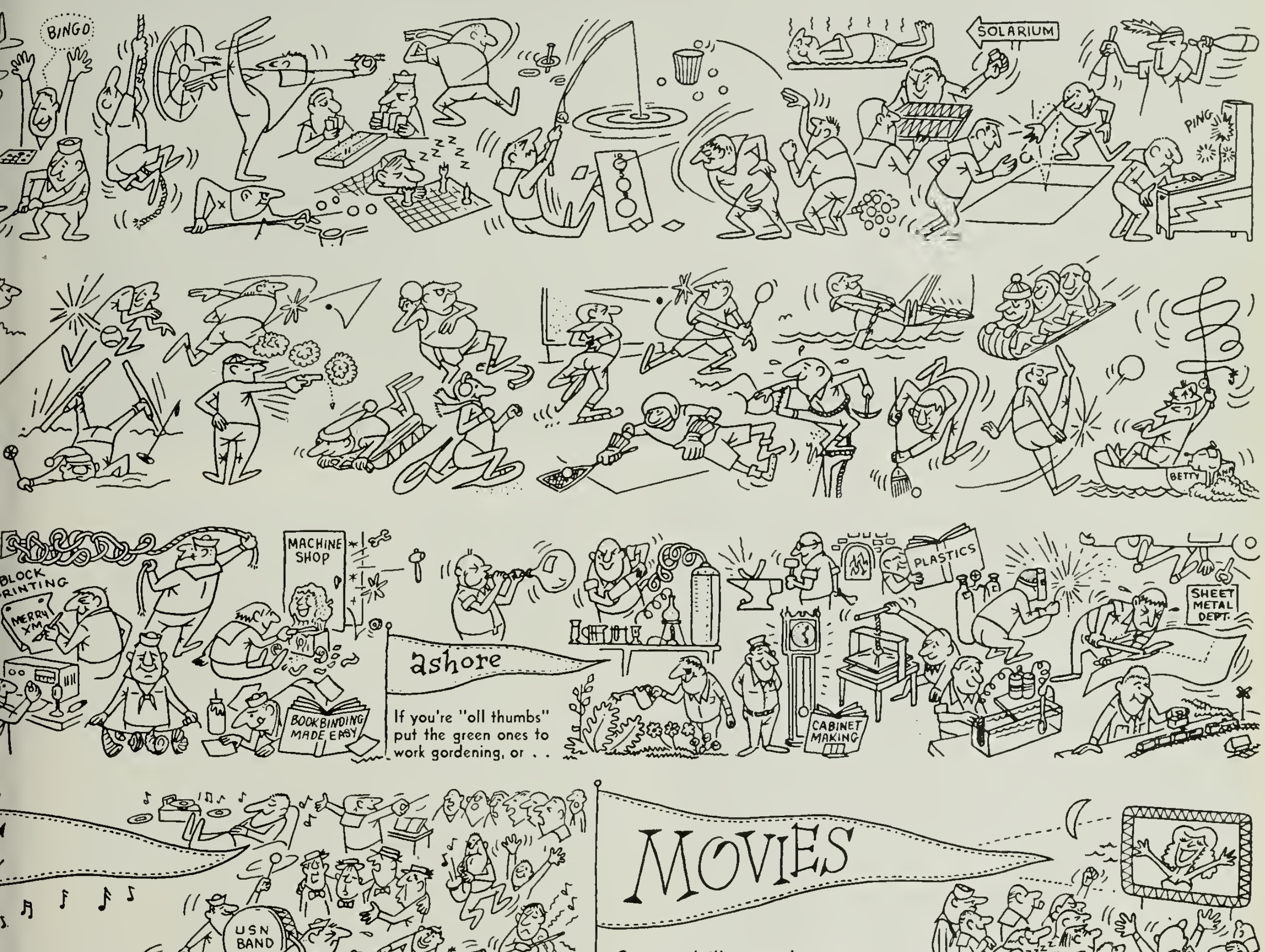
for the NAVY FAMILY

Take advantage of the changing scenes of Navy family life and participate in local variations afforded in fun.

at home...

Prepared by ALL HANDS Magazine

on for the Navyman



ashore

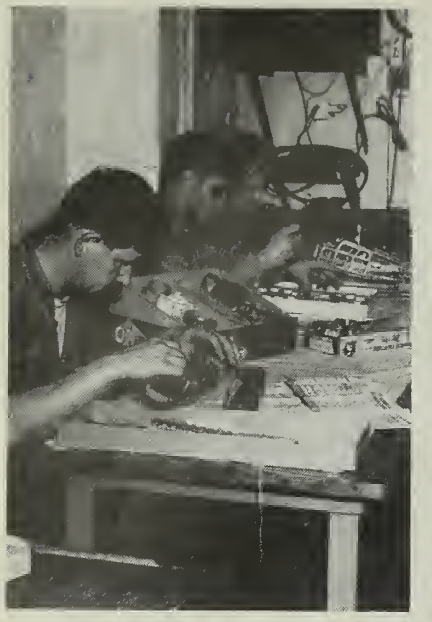
If you're "oll thumbs" put the green ones to work gordening, or . .

music can be
ne whether it
or symphony.

MOVIES

Current thrillers and westerns, now playing at your hometown theatre are brought to you.

or abroad..

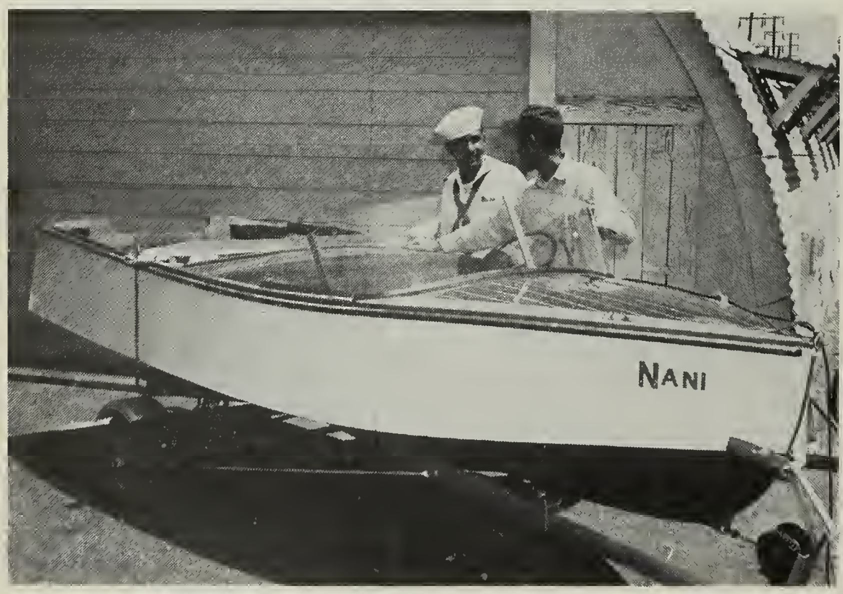


Hobbies

Do-It-Yourself

ALMOST EVERYONE has a hobby—something that he especially likes to work at or study outside of his main job. Whether it's collecting stamps, shooting unusual photos, building model ships or planes or just plain do-it-yourself, Navymen on board ship as well as on shore station have the bug.

Many hours of the sailor's free time are spent in ships' hobby shops. Here is a picture story of some hobbyists at work. *Top right:* A bluejacket on board USS *Kearsarge* (CVA 33) puts the finishing touches to a painting of Mt. Rainier, Wash. *Top left:* Men relax in YOG's galley with model ships, paintings and aircraft. *Left:* Duty in Japan gives sailor ideas for his ceramic creations. *Bottom left:* After hours of hard work, whitehats look pleased with the results of their labor. *Bottom right:* Crew members of USS *Bon Homme Richard* (CVA 31) browse through stamp catalog.



Travel

See-It-Yourself

GREECE, a nation of history, beauty and pleasant climate, has long been a favorite spot for visiting sailors. This country was one of the lands visited by several escort destroyers on their recent cruise with the Sixth Fleet in the Med.

Navy sightseers from the DDEs enjoyed visiting the sights, both modern and ancient. Among the popular points of interest to all visitors is the famed Acropolis with examples of the world's great architecture, including the Parthenon. The bluejackets enjoyed the experience of riding back into history in this ancient land—in modern taxis and buses, or not-so-modern horses and buggies. At the same time they found modern Athens and its port Piraeus equally fascinating.

Here are some Grecian scenes: *Upper left:* Navymen overlook city of Athens. *Upper right:* Two bluejackets settle back for a ride in an old-fashioned horse and buggy. *Right center:* Shopping for foreign wares is a favorite pastime for Navymen. *Lower right:* Italian lass at Greek movie house catches eye of sailors touring Piraeus. *Lower left:* Seamen in port city of Piraeus find direction from policeman.

Roundup of Winners in All-Navy

THREE ALL-NAVY CHAMPIONSHIPS have already gone by the boards this year. Four more are on tap.

All men and women taking part in All-Navy competition competed for spots on one of six regional teams dependent upon the area in which their command was located. These regions included Atlantic Fleet, North Atlantic, South Atlantic, North Pacific, South Pacific, and Western Pacific.

Boxing

First All-Navy championship to come along this year was boxing. This event was held in Gymnasium 402 at the Newport, R. I., Naval Station 6-7-8 March where close to 12,000 spectators sat, watched and cheered the fighters on to greater glories.

The fight fans came in a festive mood and were rewarded by plenty of fast and furious action in which five of the fights ended in knockouts, five by TKO, with 24 unanimous decisions and only five split decisions. In a total of 42 scheduled bouts, only three winners were announced by way of default.

Fighters representing some 40 commands came from as far away as the Philippines and as close as the nearest destroyer tied up to the new $4,000,000 pier in Newport.

Each region sent a strong aggregation of fighters; any of whom could have gone all the way had a punch been thrown a little quicker and harder, a jab a little stiffer and footwork a little fancier. But the ones who did win did so by clean-cut decisions.

For a clean-cut decision you could take the finals of the heavyweight division in which Henry Ebron, GMSN, from uss *Milledgeville* (PC 1263) not only proved that he was the Florida State Champion and Sixth Naval District champ but the 1957 All-Navy heavyweight champion as well.

In his fight with Lewis Jones, AA, from VAAW-35 at NAS San Diego, heavy leather was thrown from different directions with no punches wasted. Both fighters hit hard with heavy lefts and rights, Jones throwing straight punches while Ebron, standing mostly flat-footed, added a chopping right hand alongside the head mixed with uppercuts. But it was all over in 1:10 of the second round when Ebron, after missing with a right, stepped in, pivoted and slammed a left uppercut to the midsection which doubled Jones who dropped to the canvas on both knees and hands for the count.

Winner of the 112-pound class is Antonio Adame, AN, from NAS Whidbey Island, by a unanimous decision over Davis S. Laguana, SN, from NavSta, Sangley Point.

ROPING THE TITLE—Tabby Lee, 125-pound class All-Navy and Inter-Service boxing champ, holds back a right after knocking opponent through ropes.

The 119-pound All-Navy champ is Ray Wharton, SH2, fighting for the Atlantic Fleet from uss *Haynsworth* (DD 700) who fought all three nights winning each bout unanimously. In the first night's bout he defeated Ray Sharabba, AN, from NAS Jacksonville, went on to defeat Jose Colon-Rivera, SA, NTC San Diego, in the semi-finals and copped the title by putting down the attack of Bruce Davis, AM3, from NAS Moffett Field.

One of the crowd pleasers was the 125-pound class of Francis "Tabby" Lee, BMSN of the Atlantic Fleet from uss *Cascade* (AD 16) and Richard Grassley, SA, from the North Atlantic region of the Newport NavSta. Lee, with the graceful movements of a cat was quick, sure and methodical. When the cards were collected at the end of the bout, Lee was declared the winner by a unanimous decision, but he knew that he had been in a real battle.

All-Navy winner of the 132-pound class was Jerome Brown, AN, of the Atlantic Fleet from uss *Leyte* (CVS 32) who was awarded a unanimous decision over Matthew J. Mullaney, SKAN, from uss *Mercury* (AKS 20).

In the 139-pound class Larry M. Burnett, AN, of the South Atlantic Region from VP-44, NAS Norfolk, took unanimous decisions over Ronnie Jackson, AN, from VW-3, NAS Agana, Guam, and Manuel Gonzales, FA, from Great Lakes and, in the finals, was awarded another unanimous decision over Duhart Bailey, SD3, of the Atlantic Fleet from uss *Cascade* (AD 16).

The finals of the 147-pound class teamed William Branch, SN, of the Atlantic Fleet from uss *Yosemite* (AD 19) and Roosevelt Turner, AE3, from Fleet Electronics, PacFlt. Branch became the All-Navy champ by way of a unanimous decision.

The 156-pound class All-Navy title went to Charles D. Theobald, SN, of the Atlantic Fleet from uss *Ticonderoga* (CVA 14) on a unanimous decision over Charles E. Mull, CDCN, from MCB9, Detachment B, Pearl Harbor.

ourneys

DOWN THE ALLEY—Navy bowlers throughout the Fleet picked up the ball for a try at regional titles and a crack at the pins in All-Navy tourney.

In the 165-pound class, Joe Adair, SA, of the Atlantic Fleet from USS *Cascade* (AD 16) was the only man to step into the ring to be declared All-Navy champion without wearing gloves. He won by default over Paul Brown, SN, from USS *Tidewater* (AD 31) who had injured his hand in previous bouts.

The 178-pound class winner is Clifton Patterson, TN, from USS *O'Brien* (DD 725) who fought it out with Donald Hobson, SN, of the Atlantic Fleet from USS *Sierra* (AD 18) to gain a split decision.

Trophies in the form of a mahogany plaque were awarded to the 1957 All-Navy boxing champs, and all participants received silver-plated medallion key chains.

The Atlantic Fleet region took six of the 10 decisions handed down. South Atlantic had two winners; North Pacific and South Pacific each one.

Less than a week after the All-Navy Boxing Championships the 1957 Inter-Service bouts were held in the same gym on the Newport Naval Station with some of the same contenders battling it out in the same gym.

Some 10,000 fight fans crowded around the ring during the two-night slugfest with 40 of the contestants going to the post during a grueling five-and-a-half hour marathon the first night.

Strangely enough, with the best battlers in the services hammering away at each other, there was only one knockout over the entire route. There were, however, three TKOs. The Marines came out on top with four victories followed by the Air Force with three, Navy two and Army one. The two Navy winners were Ray Wharton (in the 119-pound class) and *Cascade's* "Tabby" Lee (in the 125-pound class).

Basketball

Scene of the All-Navy basketball tournament was Barney Hall at the U. S. Naval Training Center, Bainbridge, Md., where, during the week of 18 March, the Bainbridge Commodores, five-time 5th Naval District champions, and representing the South Atlantic Region, emerged as All-Navy champs by defeating ServLant 78-72 in the finals. ServLant, the Atlantic Fleet representative, entered the finals by defeating SubPac (representing WestPac) 104-65 in the semi-finals.

Bainbridge was also the focal point of the Women's All-Navy finals where the San Diego Waves defeated the Norfolk Waves 60-38.

NAVY SLUGGERS will swing for All-Navy baseball crown in Aug when Coast Guard plays host at Cape May, N. J.

COMING UP—Golfers in the Navy will tee off for Navy title in August too. Com 6 will be host this year.

In the men's division, the Bainbridge Commodores, playing before a home crowd which packed Barney Hall to the rafters, had in their sights the All-Navy title. But, more than taking the coveted title, they wanted to be the first All-Navy winner ever to participate in a post-season collegiate hoop tourney. And their eyes were focused on the AAU cage tournament being held in Denver, Colorado, the following week. But now they had to hurdle ServLant.

ServLant had served notice of its prowess in the quarter-finals and semi-finals. The Whitehats quickly disposed of the Bluejackets of Great Lakes, 94-75 on the power of Sonny Tibbs and Jack Devine, both scoring 22 points. Then in a night battle that really upset the oddsmakers, semi-finalists of SubPac were annihilated 104-65 as Tibbs and Dawson fired the loudest shots with 20 and 17 tallies. The ServLant five had shown no signs of having played two games in one day as they played a firehouse style of basketball that sent the Lakers and SubPac home to nurse their battle wounds.

In the finals a victory, looked easy at first, for the Bainbridge Commodores as they raced off to a fast start. It took the Whitehats of ServLant over 11 minutes to register their first field goal. By this time the flag carriers of the South Atlantic Region had manufactured a 26-3 advantage and many onlookers quickly predicted a romp for the Commodores. By halftime the margin was cut to 41-27. The second half was to be a different story.

FLYING TO VICTORY—Howie Landa of the Bainbridge Commodores leaps for basket during All-Navy championship game with *White Hats* of Servlant.

Shortly after intermission the smooth passing and accurate shooting of the Whitehats of ServLant brought them up to within four points of the winners.

But it wasn't enough. It seemed as though every time they looked up, the Commodores' forward, Howie Landa—smallest on the squad—was in the way. He paced the South Atlantic's representatives to the victory, popping 21 points through the nets.

Bob Kessler, probably the tourney's greatest rebound artist, added his talents to the daring antics of Landa. The jump-shooting of Jack Sherry and the smooth work of Bill Dodd and Hal Donald helped keep the Commodores out in front all through the game.

Sherry was second only to Landa in scoring with 18 points while Dodd had 12, Kessler 10 and Donald nine. Chuck Rolles, another giant in midget's clothing, dropped seven points in for good measure on top of playing a fine floor game.

For the losers Dawson collected 15 points to pace them while Tibbs notched 14. Devine had 13 and Cottrell had 10. Barnett scored only four points but played a great all-round game.

The NTC San Diego Waves, representing SouthPac, prevented a South Atlantic sweep by tumbling Norfolk Waves 60-38 in the finals of the Women's All-Navy classic. Maggie Cozard set the blistering attack of the Californians by firing 33 points through the nets and overshadowed the work of loser Betty Rush, who notched 20 points.

In the quarterfinals and semifinals

COURTING A VICTORY—Racket wielders will keep the courts busy as they get in trim for championship matches.

of the women's division, games went to San Diego and Naval Security Station Washington at the expense of Norfolk and Alameda. It was a heartbreaking defeat, 50-42, that the Norfolk team suffered for they had led at half-time 28-24 and at the end of three quarters they were out front, 36-34.

Alameda was never in the battle against Washington and dropped out of the running via a 53-16 trampling.

Following the All-Navy finals, the Bainbridge Commodores, 20 point underdogs going into the AAU playoffs in Denver, Colorado, defeated a highly rated Lockyer Markets team from Long Beach, 75-63 in the opening round. The Commodores were knocked out of the tournament, however, by the powerful Wichita Vickers Oilers 102-69 in the second round.

Bowling

In bowling, it was the team from the South Atlantic region which swept all the top trophies in the men's division during the three-day tournament held 9-10-11 April at Treasure Island's Naval Station.

Although handicapped by a badly bruised right thumb, Lewis Nicolletta, HM1, topped all the other bowlers and returned to Guantanamo Bay with three trophies—two of them individual; the other a team trophy.

Because the spectator interest was so high around the alleys during the three nights you had to get there pretty early or else you were one of the ones standing three to four deep in the galleries behind the six rows of seats.

Nicolletta's individual trophies were for his singles performance in five games which netted him 991 pins knocked down on an average of 198 points per game. In the all-events, which ran to 15 games, he again came out the winner chalking up 2916 points at the rate of 194 points each game. The team trophy came to the four-man South Atlantic Region squad for a total pinfall of 3587. In addition to Nicolletta, the men's winning team consisted of Jack Hubbard, ATC, Richard Pierzyna, AN, and Jesse Wilson, AMC.

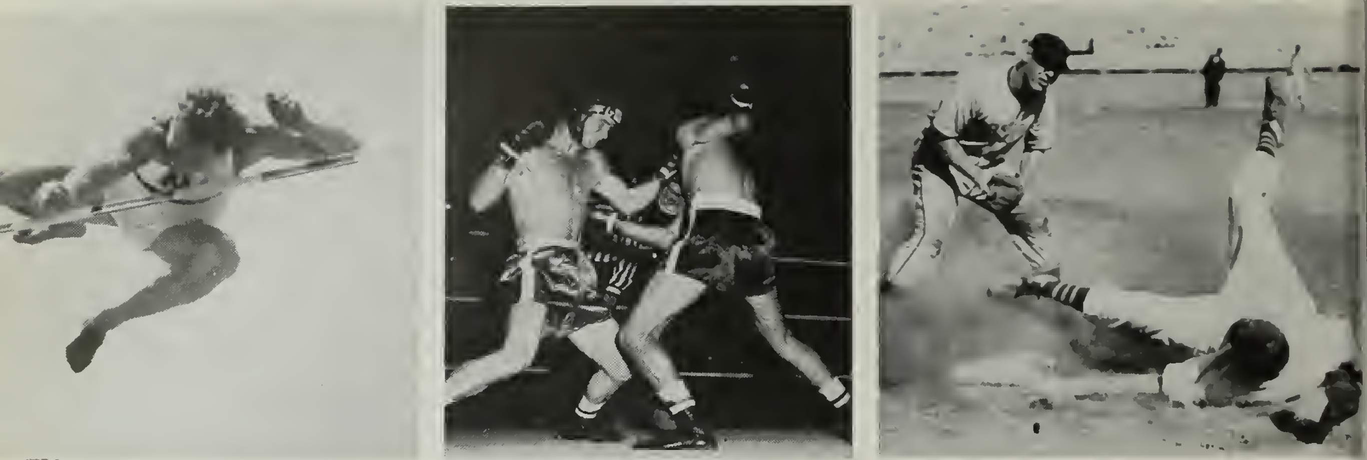
Two of these men, Hubbard and Wilson, teamed up to take first place in doubles knocking down 1945 pins.

There were 48 bowlers who participated in the tournament—24 men and 24 women. Oddly enough—and probably shocking to the masculine members of the Navy—was the way the "weaker" sex came to the fore. It must be admitted that, so far as trophy winning was concerned, the top bowler was Wave Dorothy L. Pennell, AC1, from North Island rolling for the South Pacific region.

In the women's division she took the singles with an 865 pinfall and all-events title by knocking over 2524 pins while helping to nail down a team trophy by decking 3121 pins. Then she teamed up with Joan C. Ragel, TE1 from NTS San Diego, to cop the doubles championship with 1555 pins. Others on the winning team included LT Dorothy J. Hendricks (NC) and Florence Rowe, MA2.

If the groans poured out by the crowd would help, South Pacific region's Warren E. Houk, IC1,

DOUBLE POW!—Two-title winner Ray Wharton connects one to the chin of Ray Sharabba in Navy title bout. He was also 119-lb Inter-Service champ.



MANY SEASONED OPPORTUNITIES—Navymen afloat and ashore have many chances to take part in various sports.

would most likely have come out a winner. He had about the toughest luck anyone could have and still claim they were in a tournament. His claim to fame was by way of picking up a total of 29 splits; 13 the first night, 11 the second and five on the third.

All-Navy Sports Coming Up

Other events in All-Navy sports which are upcoming include tennis, baseball, softball and golf.

Tennis will be handled by Com 11 who will be host to the visiting netmen this month during the week of the 12th. Decision as to who will participate will be determined by the outcome of regional contests slated to start a week earlier.

For the first time the Coast Guard will become host to an All-Navy tournament when they oversee the *baseball* playoffs at Cape May, N. J., starting 26 August.

CinCLantFlt will be host to both the men's and women's *softball* events which will be held during the week of 2 September.

Aspiring *golf* enthusiasts will envision the apparition of tee shots being slammed some 300 yards down the center of the fairway when they get together during the same week tennis will be taking place. Host for this All-Navy tournament, which will include a women's as well as a man's division, will be Com 6. It will be well worth winning this golf championship.

An invitation has been extended for the All-Navy golf champion to participate in the Bing Crosby National Pro-Amateur Golf Championship in January 1958. Also included will be a stag Calcutta party one evening, a Paisano dinner the next, and Victory clambake for the finish, with a host of entertainers. With all these events in store for the winner it will pay to sharpen up your golf game.

There's something about being a winner—whether it be All-Navy or any other sports program—that can shoot you right into the limelight. But win or lose, medal or no medal, Navy's sportsmen have earned the reputation for always making it a tough scrap.

—Tom Wholey, JOC, USN

Schedule of All-Navy and Inter-Service Matches

New All-Navy Champs will be crowned in golf, tennis, baseball and softball during the month of August. Inter-Service meets in tennis and golf are also scheduled.

Here's a run-down of the month's events and where they will take place:

	ALL-NAVY	
Tennis	**12 August**	**Com 11, NTC San Diego**
Golf*	**12 August**	**Com 6, NAS Memphis, Tenn.**
Baseball	**19 August**	**USCG, Cape May, N.J.**
Softball*	**26 August**	**CinCLantFlt, NavBase, Norfolk**
	INTER-SERVICE	
Tennis	**20-24 Aug**	**Army, Washington, D.C.**
Golf	**21-24 Aug**	**Marines, Parris Island, S.C.**

***All-Navy finals for women will also be held at the same time and place.**

Sunshine & Muscle Culture Club

During a seven-month cruise to WestPac, a handful of officers and enlisted men from the heavy cruiser USS *Toledo* (CA 133) didn't let battle stations and watches, or long days and nights at sea prevent them for getting their daily exercise.

Toledo's "Sunshine and Muscle Culture Club" met daily at 0530, in order not to have duty or drills interfere. Although only a small portion of the crew—10 to 15 regular members—were active in the club, remarkable results were accomplished.

One of the most active participants was "Pop" Record, BT1, who is more than 50 years old. Record, like fellow members of the hearty group, couldn't resist the daily meetings despite the *dawn schedule.* "After all," a spokesman for *Toledo's* S&MCC said, "health is *more-better* than wealth."

The daily exercises are conducted on *Toledo's* forecastle by LTJG Robert G. Donnelly, USN.

NAS Oceana Health Club

Personnel at NAS Oceana, Va., are literally "sweating it out" nowadays, and it's not because of the current heat wave.

For the past six months, all hands have been taking advantage of what NAS Oceana claims as the Navy's first and only Health Club.

Under the supervision of Chief J. Waering, USN, the club offers light exercises or a full scale workout, or just a steam bath and a rub-down. For those who desire to lose or gain weight, the club also maintains all of the necessary equipment.

Featured in the club are an exercise bike, rowing machine, vibrating machine, sun lamp and steam baths, which can be followed with a hot shower and a rub-down.

In addition, there are all the tools of the trade available for those interested in weight lifting, wrestling, judo and boxing.

The Health Club is open daily, with one morning each week being reserved for dependents.

Skagit's *Git-Up-and-Go*

The attack cargo ship USS *Skagit* (AKA 105) may not have the only sports program afloat but with good participation boasts of having one of the most active.

Since initiating an organized sports program last October, teams from every division on the ship have been active in softball, basketball, bowling, boxing, tennis, golf and swimming in their intra-ship rivalry. *Skagit* also fields "varsity" teams which compete with other ships and stations.

In charge of *Skagit's* sports program is Jack Corb, QMC, USN. He thinks that the program's original goal—that of improving discipline, morale, and physical conditioning through widespread participation in organized athletics—has been successfully achieved.

"We have men coming to us every time we're in port to reserve gyms or athletic areas so that they can participate in sports," Corb said. "This in itself seems to show that our original purpose has been successful."

Vacation in Volcano

Have you ever thought of spending a few days' leave or even a week or two within the crater of one of the world's most active volcanoes?

The opportunity is available to Navymen and their dependents stationed or on leave in the Hawaiian Islands.

Kilauea Military Camp (better known as "KMC") is the place. It's a rest and relaxation camp for all members of the armed forces and their dependents. KMC is located within the Kilauea Crater of the famed Moana Loa volcano on the Island of Hawaii, which is about 200 miles south of Honolulu.

You get to KMC by a military transport plane, Navy LST or commercial airliner. Married men and their dependents go by LST, while the single men and women travel by MATS. If you have a car you may take it to the camp site with you aboard the LST.

Even before you arrive at KMC you'll notice a change in the climate. The invigorating mountain freshness at the 4000-foot level is a great deal cooler than the sub-tropic conditions found in the Honolulu area.

Accommodations include private rustic cabins complete with fireplaces, motel-type apartments, or a bunk in the big "Hall of Flags" barracks.

Although KMC has all the usual service facilities for the convenience of guests, it has none of the familiar military restrictions. Guests wear casual civilian clothes and the only schedules to be followed are cafeteria hours—and with the fare offered at KMC, few are inclined to miss these schedules.

There are recreational opportunities galore. They include daily bus tours to the different points of interest. Miles of hiking or horseback trails surround the camp area. Picnics are scheduled often, or you can make your own plans and come and go as you like. If you take your car to KMC, there's the whole island, the biggest and most colorful of the Hawaiian chain, to explore.

Among the facilities offered at KMC are several lounges with all types of recreation equipment, a nursery, library, chapel, theater, dispensary and exchange facilities including a snack bar, gasoline station, barber shop and laundry. There are bicycles for rent and horses for hire. Along the sporting lines, there are the Volcano Golf Course, plenty of good fishing, and hunting.

If your ship is home-ported at Pearl Harbor, or if you are based ashore at one of the many Navy and Marine Corps installations in the Hawaiian Islands, or even have the opportunity to go there on leave, you'll miss a chance of a lifetime if you don't go to KMC.

Reservations and transportation arrangements are made through the 14th Naval District Special Services Office.

If you're like most of the visitors to the Kilauea Military Camp, you'll be looking forward to a return visit even before you depart.

BOUND FOR THE BEACH—Whitehats show full liberty form as they leap from boat to shore in a foreign port. Right: Schatz brothers enjoying life in the Orient as stone statue of Buddha looks on.

Fremont's Crew Gets Around

"Join the Navy and see the world."

This recruiting slogan of yesteryear still has meaning in today's nucleonic-supersonic Navy.

Evidence of this is USS *Fremont* (APA 44) and other units of TransPhibRon Four which recently completed a five-month tour of the Med.

The amphibious bluejackets and leathernecks took advantage of the "packaged tour" and played the role of tourist to the hilt. The Gatormen are still talking about the thrill and excitement of the bull fights in Malaga, Spain; the tours of Rome and the opera in Italy and the ruins of the Acropolis in Athens.

The first insight into Middle Eastern culture was provided at Izmir, Turkey, while Patras, Greece, offered tours to the site of the first Olympic Games. Genoa, Italy, offered a welcome change to big city life with its unlimited opportunities for shopping; and LaSpezia, Italy, had its picturesque harbor and modern apartment buildings despite the smallness of the town. The island of Rhodes offered privacy, lovely surroundings and Moorish architecture.

Of course, it wasn't all play during the cruise. There was plenty of hard work, too. Amphibious landings were made with the Second Battalion of the Sixth Marines on the islands of Sardinia and Crete, and on the Gallipoli Peninsula at the Strait of Dardanelles. Gunnery exercises and all other types of shipboard drills were held continually during the five-month cruise.

Fremont was among the units of the Sixth Fleet which made an appearance off the Sinai Peninsula when hostilities broke out there, and again when trouble seemed imminent in the kingdom of Jordan.

Musical Plankowner

When Chief George A. Guliksen, MUC, USN, retired on 39 in July, he left only one other plank owner of the original U. S. Navy Band on board. That is CDR Charles Brendler, USN, present conductor of the band which was officially organized by President Coolidge in 1925. Gully had spent 37 of his 39 years of active duty traveling with the Navy Band in and out of Washington.

Chief Gulliksen, who plays both violin and clarinet by ear, hasn't performed with the band since 1939. His duties since that time have been as custodian of the band's music library. In this respect, Gully's accomplishments have been the cause of considerable wonderment on the part of the younger, more flighty band members.

"We have more than 10,000 numbers in the music library," they say,

Donations for Memorial Stadium by Navymen, Marines Pass Half-Million Mark

The fund-raising drive to build the Navy-Marine Corps Memorial Stadium in Annapolis, Md., is moving along at quite a clip.

As of 1 July donations had passed the half-million mark, reaching $500,357. To help reach that figure, retired enlisted men, contributing on an individual basis, have kicked in more than $10,000, enlisted and officer Reservists (who've done a fine job of soliciting funds from friends of the Navy) have turned in $23,000, and graduates of the Naval Academy have individually contributed $124,000. Large group donations have come in from Navymen and Marines in units ashore and afloat.

Some units are turning the drive into a real competitive effort, and one of the keenest competitions is the rivalry between the Atlantic and Pacific Fleets. So far, the Pacific Fleet is leading in a neck-and-neck race with donations totaling $53,900, but Atlantic is close with $53,179.

Stadium will honor Navymen and Marines.

Goal of the drive is $2,100,000. The construction of the stadium, which will serve as a joint memorial for men of the Navy and Marine Corps, is estimated to cost over $3,000,000, of which a million dollars has already been set aside by the USNA Athletic Association.

Small ships and units are putting on a big effort too. For instance, ServPac's Ship Repair Facility at Subic, P. 1., with only 16 U. S. citizens among its personnel, staged a minstrel show which raised $450 for the drive. SubPac's USS *Nereus* (AS 17) also has contributed $1537, and the military units of the Severn River Naval Command at Annapolis have dug deep to turn in $10,770. Incidentally, little SRNC is leading all the Naval Districts in contributions with a figure of $39,990.

The drive will roll on until the goal is reached. Pledges will be taken through April 1959.

Here's how the campaign shaped up in the 1 July breakdown of donations made by forces within the Fleets and the new leaders in various categories which were not reported in the last issue of ALL HANDS (figures for the Naval Districts include donations from the public, as well as those from shore activities):

AirLant	**$11,872**
PhibLant	**1481**
USS *Pocono* (AGC 16)	**424**
USS *Chilton* (APA 38)	**354**
BatCruLant	**6783**
DesLant	**14,392**
USS *Gatling* (DD 671)	**1006**
FMFLant	**4118**
Force Troops	**1815**
MinLant	**498**
ServLant	**5820**
MCB 4	**200**
USS *Nipmuc* (ATF 157)	**83**
SubLant	**4453**
USS *Ray* (SSR 271)	**153**
MSTS	**4631**
AirPac	**18,031**
PhibPac	**2070**
USS *Carter Hall* (LSD 3)	**182**
USS *Henrico* (APA 45)	**139**
CruDesPac	**10,140**
USS *Los Angeles* (CA 135)	**337**
USS *Spangler* (DE 696)	**400**
FMFPac	**5267**
First Marine Brigade	**1900**
MinPac	**1520**
ServPac	**3178**
USS *Locator* (YAGR 6)	**151**
SRF Subic	**450**
SubPac	**10,207**
USS *Pomodon* (SS 486)	**281**
USS *Wahoo* (SS 565)	**255**
NAVAL DISTRICTS—	
1st ND	**6104**
3rd ND	**20,768**
4th ND	**37,335**
5th ND	**12,539**
6th ND	**8389**
8th ND	**2944**
9th ND	**20,385**
10th ND	**3059**
11th ND	**5927**
12th ND	**6363**
13th ND	**1282**
14th ND	**4010**
15th ND	**88**
17th ND	**100**
SRNC	**39,990**
PRNC	**6988**

"and Gully could recite the catalog number and hum eight bars from the chorus of practically any one of them."

His memory has served the band well in other respects. Having traveled all the 48 states and spent time in nearly every American city with the band, he was a "walking road map, restaurant and hotel directory and sight-seeing guide rolled into one."

4.0 Crew

Crew members of USS *Mount McKinley* (AGC 7) rated a 4.0 in conduct while on liberty during the amphibious force flagship's five-month tour of duty with the Sixth Fleet in the Mediterranean.

Individual members of the *McKinley* crew went ashore more than 10,250 times during 60 days of liberty in 10 different foreign ports. During this time not a single case of misconduct was reported.

Mount McKinley returned to Norfolk in late June. Since departing from the states in January she has visited Gibraltar; Malaga, Spain; Genoa, Bari and La Spezia, Italy; Athens, Patras and Rhodes, Greece; Izmir, Turkey; and Beirut, Lebanon.

Shutterbug Crew

USS *Forrestal* (CVA 59) must hold some sort of record by having 2206 registered cameras aboard.

During a four-month operating period in the Mediterranean, crew members, in using these cameras, went through 7192 rolls of motion picture film, 11,804 rolls of 35-mm. film and 400 rolls of 120 film.

One of the chief attractions of shutterbugs during this time was the arrival on board of His Highness Prince Ranier, Princess Grace and Princess Antoinette of Monaco who viewed an aerial demonstration aboard the carrier.

Annual Arctic Resupply

More than 90 ships of the Atlantic and Pacific Fleet Amphibious and Service Forces are currently operating in the frigid waters of the Arctic where they are resupplying Air Force bases and remote radar outposts.

A 50-ship armada from the East Coast is supplying the northeastern Canada, Labrador and Greenland installations while a fleet of 46 ships is restocking the Northern Pacific outposts with food and equipment.

SIDELINE STRATEGY

NAVYMEN AND WOMEN from NTC San Diego are making sports history.

Seaman Milt Campbell the 1956 Olympic decathlon champ, has tied the record of 13.4 in the 120-yard high hurdles. That mark was set a year ago by LTJG Jack Davis, who was recently released to inactive duty. During the eastern indoor track season, Campbell also smashed the seven-second barrier in the 60-yard hurdles event.

The world's greatest all-around track star was the headline attraction in the Hawaiian AAU Invitational Olympic Fund Benefit Track and Field Meet. He won two events, tied for first in another and anchored a winning relay team to lead the Navy team to the championship.

Teaming up with Campbell in the Hawaiian Track Meet was Jerry Prewitt, SN, who took the 220-yard dash in 22.5; Benny Garcia, SN, who broke the Hawaiian AAU javelin record with a throw of 229 feet; (Garcia hurled the spear 247 feet in the finals but stepped beyond the restraining line and had his throw nullified) and Seaman Murray Keatinge, winner of the mile run. He was clocked at 4:30.

Another record setter in the Hawaiian Meet was Seaman Dick Foerster, a former NTC trackman now running under ComSubPac's banner. He won the 880-yard run in 1:52.7, breaking the old mark of 1:58.7.

★ ★ ★

NTC San Diego also boasts another true champion, although not a world record holder nor an Olympic star (yet). She's Personnel Man First Class Margaret Cozad, USN—"the Navy's outstanding woman athlete." Mag, as she is tabbed by her many friends, has won more than 60 plaques, trophies and cups for her outstanding achievements in the world of sports.

She was chosen "Miss Softball of 1954" at the American Softball Association's Women's World Softball Tournament. This versatile Wave also copped the 11th Naval District Tennis Championship in both singles and doubles competition in 1955 and again in 1956. As a badminton star, Mag won three straight 12th Naval District singles and doubles titles and since being transferred to San Diego, has won the 11th ND championship for the past two years.

As a golfer, PN1 Cozad won the Western Women's All-Navy Crown in 1956, as well as numerous awards in the Southern California area. Mag was a member of the San Diego NTC Waves basketball team that won the All-Navy title this past season and was also instrumental in helping the Waves win the 11 ND bowling and volleyball titles. In her only year in competitive swimming, she set a backstroke mark at San Diego's Navy Field which still stands as a pool record.

Speaking of sports at NTC San Diego, here's a bit which was overheard in a recruit cheering section at a recent baseball game, "Hey, Maggio, hit it over the bulkhead."—H. G. Baker, JOC, USN.

THE BULLETIN BOARD

Performance Evaluation Sheets Play Big Role in Advancement

THE MARKS YOU RECEIVE on your Enlisted Performance Evaluation Sheet are becoming more and more important. Beginning with the August 1957 service-wide examinations, these marks will determine your performance factor in the final multiple.

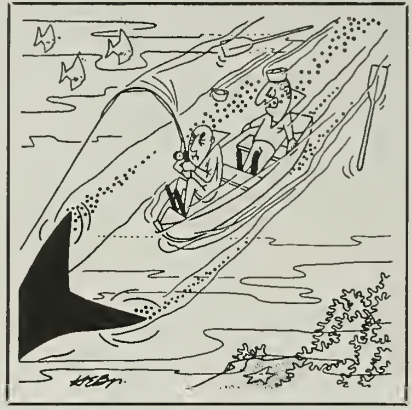
It is now possible to attain a final multiple of 180. Highest possible total for performance will be 50 points. Maximum credit for other multiple factors are: examination score, 0-80; total active service, 20; service in pay grade, 20; and awards, 10.

These and other pertinent facts are contained in BuPers Inst. 1430.7C which consolidates all of the latest information regarding advancement in rating of enlisted personnel. It applies to the men and women of the Navy and Naval Reserve on active duty; Fleet Reserve and retired men on active duty; temporary warrant and commissioned officers, USN and USNR, who are on active duty and whose permanent status is enlisted; and enlisted personnel on active duty in the TAR program.

Here's a summary of the main points of the instruction:

- ***Advancement Quotas***—Advancement to petty officer pay grades is the result of service-wide examinations. If you meet all eligibility requirements and pass, you will be advanced in accordance with the needs of the service. Where there is a continuing need for additional petty officers in certain rates, all passing the examinations will be advanced. Where the need is smaller, necessity calls for the Chief of Naval Personnel to limit advancements by imposing "advancement quotas." Where quotas are placed, advancements are made in accordance with final multiple. In the case of advancement within quotas, only those who took part in the *most recent* service-wide examinations for that rate will be considered.

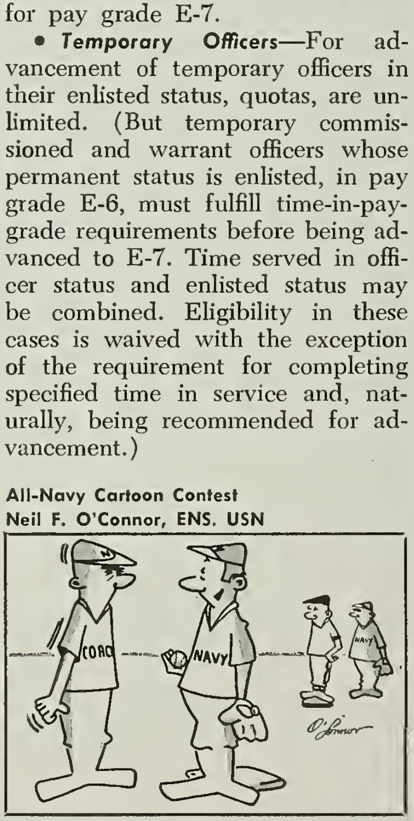
Advancements to pay grades E-4 through E-7 may be subject to quota control in some ratings and pay grades. These quotas will be administered on a service-wide basis. The size of quotas ties in with the maximum number of additional petty officers that can be supported and the authorized enlisted strength of the Navy. These quotas will be administered through the Commanding Officer, U. S. Naval Examining Center, for pay grades E-4, E-5 and E-6 and by the Chief of Naval Personnel for pay grade E-7.



"You and your darn pride."

- ***Temporary Officers***—For advancement of temporary officers in their enlisted status, quotas, are unlimited. (But temporary commissioned and warrant officers whose permanent status is enlisted, in pay grade E-6, must fulfill time-in-pay-grade requirements before being advanced to E-7. Time served in officer status and enlisted status may be combined. Eligibility in these cases is waived with the exception of the requirement for completing specified time in service and, naturally, being recommended for advancement.)

All-Navy Cartoon Contest
Neil F. O'Connor, ENS. USN



"Thanks Coach, but I took a shower before the game!"

- ***Eligibility Date***—Advancements to E-4 through E-7 of personnel on active duty (including TARs) is effective on the date set in the notifying letter. But in order to be advanced, you must be or have been eligible on the last eligibility date specified for the examination you took.

Definition of the "terminal eligibility date" (that is, the last date by which you must have completed time-in-grade requirements) is the 16th day of the third month following the month in which examinations are held. In other words, 16 May is the terminal eligibility date for the February examinations, 16 August for the May examinations, 16 November for the August examinations, and 16 February for exams in November.

- ***Examination Dates***—Examinations will be held in February, May, August, and November of each year. The February exams are for advancement to E-4 through E-7 of all ratings. Those held in May and November are for advancement to certain E-4 rates only. The August exams will be for advancement to all E-4, E-5, and E-6 ratings.

Breaking this down to get as close to the exact date as possible, the normal schedule for examinations is the first Tuesday in February for E-7; first Thursday in February, May, August and November for E-4; second Tuesday in February and August for E-5; and second Thursday in February and August for E-6.

- ***Continuous Service Requirements***—In computing total naval service and time in pay grade for credit on final multiple, continuous service is not required. Time served before broken service is counted in all computations for advancement multiple credit. If, for any reason, you had the misfortune to be busted, service before being reduced in rating also counts toward final multiple credit. It should be noted that *continuous service is required in determining eligibility* and also, that for eligibility, service in pay grade before a reduction *cannot* be counted.

- ***Effects of Disciplinary Status***—Where do you stand if you have been in a disciplinary status? You may still be rated if you are in a duty status on the effective advancement date or will be before the limiting date stated in the advancement letter; also if you are still eligible in all respects and your recommendation for advancement has not been withdrawn; and when your disciplinary status is resolved.

For purposes of eligibility for advancement, disciplinary status starts when information is received that you may have committed an offense. It ends when it is determined that charges will not be pressed, upon acquittal, upon completion of any sentence imposed, or when placed on probation. But it's still up to your commanding officer to decide whether or not the offense is a single isolated occurrence or warrants withdrawing the recommendation for advancement.

- ***Advancement after Broken Service***—If you are included within the quota for advancement to E-4 through E-7 but your advancement had not been effected at time of discharge, and if you reenlisted on board your permanent duty station after the date set in the letter for advancement, your effective date of advancement would be the date of your reenlistment.

For USN personnel included in the quota who are discharged before the effective date of advancement and whose intentions are to reenlist under continuous service conditions other than within 24 hours, advancement cannot be made on the basis of the original advancement letter. If you wind up in this category, send a request to the Chief of Naval Personnel (Pers-B223) via the commanding officer or officer in charge of the activity where you are reenlisting. The Chief of Naval Personnel will verify the advancement by speedletter or message, directing that you be reenlisted in the higher pay grade if you reenlist *after* the original effective date of advancement.

If you are discharged and stay out more than 24 hours but decide to reenlist *before* the original effective date of advancement, you should take the same steps of forwarding a request. Naturally, in this case, you will be reenlisted in the same pay grade in which you were discharged. The Bureau speedletter will provide for advancement on the original effective date.

- ***Permanent CPO Appointments***—Article C-7209 of the *BuPers Manual* supplies all the information necessary for issuing permanent appointments to E-7s. If you complete three years as an E-7 acting appointment and are recommended by your commanding officer, the Chief of Naval Personnel will issue the permanent appointment.

The same article applies to those acting appointment E-7s who are retiring or transferring to the Fleet Reserve. In cases like these, provided you are recommended for permanent appointment, the time requirement is at least 12 months' satisfactory service. In order to insure that your permanent appointment may be issued on your release to inactive duty, this recommendation should reach the Chief of Naval Personnel three months before the anticipated release date.

- ***Performance Multiples***—Evaluations made under the Enlisted Performance Evaluation System determine the performance factor for a particular examination. The evaluations must be in your present pay grade and cover the required service for advancement before the eligibility cut-off date.

Time required in different grades before the cut-off date is: E-3 to E-4, 6 months; E-4 to E-5, 12 months; E-5 to E-6, 12 months; E-6 to E-7, 36 months.

Before 1 Jul 1959 (in the case of examinations from E-6 to E-7) all evaluations made on or after 1 Jul 1956 will be used. After 1 Jul 1959, those made in the 36 months immediately before the terminal eligibility date for the particular examination will be used.

If, as could happen, you were advanced to E-4 and an evaluation sheet was due and made out on that date, this evaluation would not be

WAY BACK WHEN

Life in the Mississippi Squadron

Safeguarding the Navyman's health has long been a part of the Navy's tradition of "taking care of its own." However, in the light of present-day standards, the health precautions of 95 years ago would sound pretty quaint to a modern sailor.

For example, here is General Order Number Nine, issued to the Mississippi Squadron during the Civil War:

Cairo, Ill., October 20, 1862

Owing to the unusual number of sick in this squadron, it becomes imperative to adopt some sanitary measures to endeavor to bring about an improvement in the health of the crews.

- Hereafter breakfast will be served to the men on their turning out in the morning and before washing decks.
- The crews are to be examined at morning and evening quarters, to see if they are comfortably clad and have their under flannels on.
- Boats are not allowed to leave the vessels in hot weather without awnings, and boat keepers are required to keep the awnings spread alongside.
- In ironclads, where the sun cannot get to the decks, drying stoves must be freely used.
- Commanders will, when practicable, give the crews fresh meat and vegetables three times a week.
- The men will not be permitted to sleep in the open air, or where night dews can affect them, but will be piped down at 8 p. m. in winter and at 9 in summer.
- Every means must be adopted to keep the men healthy, and although it is very desirable to have clean ships commanding officers will do well not to wet the decks too often; the comfort and health of the men must be the first thing to be looked after.

David D. Porter,
Acting Rear Admiral,
Commanding Mississippi Squadron

used in computing your performance factor for advancement to E-5 because you would be receiving marks for performance as an E-3. In this case only marks received after that date and marked on your qualities as an E-4 would be used.

- *Examination Score*—The most important factor remains the same, however. No matter how high a final multiple you have, you must pass the examination in order to be advanced.

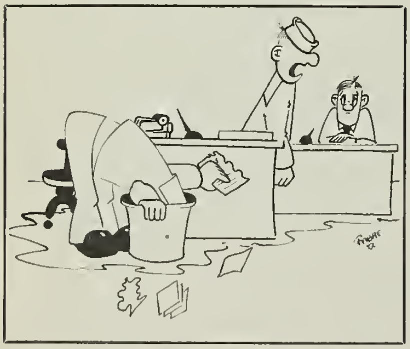
Award Multiples

Following is a table listing the multiple for Navy awards.

Credit for each award, to the maximum of 10.00 allowed, may be claimed toward the multiple as follows:

Medal of Honor	6.00
Navy Cross	5.00
Distinguished Service Cross (Army), Distinguished Service Medal, Silver Star Medal, Legion of Merit, Distinguished Flying Cross	4.00
Navy and Marine Corps Medal, Soldier's Medal (Army), Bronze Star Medal, Air Medal, Gold Life Saving Medal, Silver Life Saving Medal, Commendation Ribbon	3.00
Letter of Commendation without authority to wear Commendation Ribbon (addressed personally to individual from the President, Secretary of Defense, Secretary of the Navy, or Chief of Naval Operations), Purple Heart, Navy Good Conduct Medal or clasp earned	2.00
Presidential Unit Citation (only if entitled to wear with star), Navy Unit Commendation, Distinguished Unit Badge (Army)	1.00

All-Navy Cartoon Contest
Theodore R. Fabre, PN3, USN



"Mulligan is checking the files for that letter, chief . . ."

NOW HERE'S THIS

Key Man

Otis J. Ives, DC2, USN, fills a mighty important billet in USS *Saratoga* (CVA 60). As a matter of fact, he's the key man for the whole ship, and since *Sara* is the largest warship in the world, that's quite an assignment.

Ives took over his present job the day *Saratoga* was commissioned, which was when LCDR Eugene Cash, Damage Control Officer, handed him the ship's keys and appointed him *Sara's* locksmith.

Since then, Ives has worked long and hard at his trade. During his liberty hours, while *Saratoga* was at the Brooklyn Navy Yard for overhaul, he even worked without pay for a New York locksmith in order to learn more about the business. And, on board ship he's always on the go, periodically repairing or replacing locks on more than 1500 doors, making new keys to replace the 60 or so which are lost or broken every day, and keeping nearly 1000 safes in good working order.

Despite all the work involved, Ives likes locks.

Now then, what does he think of bagels?

Navymen Selected for OCS, LDO and WO Programs

Approximately 1100 Navymen have been selected as candidates for appointment to the rank of ensign or warrant officer (W-1) through the Integration, LDO and WO programs.

In the Integration Program 227 selectees are currently attending a 16-week course of instruction at the Officers' Candidate School, Newport, R. I. Upon successful completion of this course, these enlisted men and warrant officers will be commissioned ensign in the Regular Navy.

On 2 July, 631 temporary officers and enlisted men of the Regular Navy were commissioned ensign, USN, for Limited Duty Only. Because of the large number of LDOs selected, they will report to Newport for officer indoctrination in three groups. The first, from 29 Jul to 13 Sep; the second, 16 Sep—1 Nov; and the third, from 4 Nov to 20 Dec.

Selected for promotion to the grade of Warrant Officer, W-1, were 238 chief and first class petty officers. They will be appointed as vacancies occur during the next ('58) Fiscal Year.

Historical Photos of Marine Corps Activities Needed

The Marine Corps wants historical photographs showing activities of Marines before World War II.

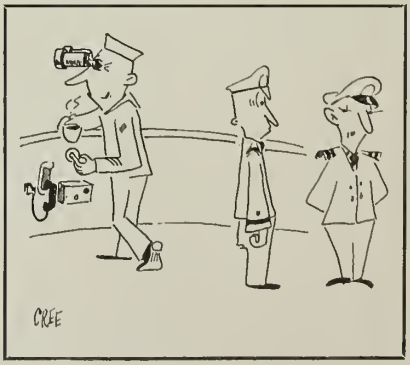
These photographs, which will be accepted on a donation or loan basis, will be used by the Historical Archives of the Marine Corps and perhaps for future publication.

The Corps is particularly interested in photographs taken in France 1917-18, Haiti 1915-32, Santo Domingo 1916-24, Cuba 1898-1910, the Philippines 1898-1902, Nicaragua in 1927-32, China 1900-1901, Panama before the construction of the Canal and maneuvers in the United States or the Caribbean during the 1920s and 1930s.

Photos should be addressed to: Commandant of the Marine Corps (Code AO3D), Headquarters, U. S. Marine Corps, Washington 25, D. C.

Photographs received on a loan basis will be returned to their owners as soon as they can be copied.

All-Navy Cartoon Contest
William E. Cree, SO2, USN



"How long has that man been standing lookout watches????"

Report on Living in Lisbon, Portugal, for the Navy Family

WITHIN RECENT MONTHS we've given you the latest word on living conditions in such spots as Paris and London. Here's a report on Portugal in general and Lisbon in particular. If you are scheduled for duty there it means assignment to an interesting part of the world and an opportunity to work with friendly people with a long seafaring tradition.

Climate. Marked seasonal and regional variations within temperate limits characterize the Portuguese climate. The greatest local variations occur in rainfall. Moisture-laden Atlantic winds bring 50 to 60 inches of rain annually at Oporto, 22 to 30 inches at Lisbon and approximately 20 inches at Faro in the south. In Central and South Portugal the rain is concentrated in the winter months and the long summers are dry and hot.

The climate in Lisbon is temperate winter and summer alike, owing to the Atlantic Ocean. Normally, three months of damp and stormy weather (December - February) make up the winter, in which frost is rare and snow almost unknown. From May to September short spells of hot weather alternate with days on which a cool strong NW wind blows. Even in midsummer the nights are almost always cool and one sleeps under a blanket.

Government Quarters. No U. S. Government quarters are available. Military personnel receive, in addition to their normal base pay, allowances and rental allowance, a special per diem station allowance as follows: $3.85 for married officers; $1.20 for single officers; $2.30 for married enlisted men; $1.00 for single enlisted men.

Housing. The decision whether to live in Lisbon or in the Estoril region is an important factor in determining the type of residence available. Lisbon's residential facilities consist primarily of apartments. Suitable houses with gardens are extremely difficult to find. On the other hand, Estoril is made up largely of villas with very few apartments available.

In the modern and more healthful section of Lisbon, there are many new unfurnished apartments, ranging from $50 to $100 per month for single apartments and from $75 to $150 per month for family apartments. The rentals do not include utilities. Moreover, apartments lack a number of facilities one would ordinarily expect, making it necessary to buy light fixtures, hot water heaters, cook stoves and refrigerators, closets and heaters. In most cases, the new apartments have adequate bathroom facilities but in a few instances the tenant is expected to supply a bathtub.

Furnished apartments are available but require more time to find, owing to a limited choice of suitable apartments with good furnishings. The landlord occasionally supplies silver and usually (not always) furnishes linen, china and glassware. The rentals for furnished apartments usually run about 40 to 100 per cent more than the cost of unfurnished ones. Refrigerators are not always furnished.

If you should be fortunate enough to find a suitable house of reasonable size in Lisbon, the rent would amount to about $70 unfurnished and around $100 furnished at a minimum. Rentals for furnished houses average from $100 to $200 per month. The number of unfurnished houses in Estoril is smaller; as a result, a suitable place generally requires considerable search. These rentals may range from near

Do-It-Yourself Ship's Store Is Big Success

The operation of a ship's store, taken for granted by the crews of the Navy's larger ships, has been made a practical reality for our small ships such as minesweepers and PCEs.

Thanks to the new simplified ship's store procedures for small ships, contained in *BuSandA Manual* (Volume VIII), and a supplementary do-it-yourself kit being furnished by the Navy Ship's Store Office, over 130 small ships are now operating ship's stores for the convenience and comfort of over 5000 men.

The new simplified setup eliminates a good part of the paperwork and bookkeeping now required of larger ships and formerly required for the operation of all ship's stores.

It is now practicable for a line officer whose primary duties require most of his attention elsewhere to run an efficient store. The material furnished by the Navy Ship's Store Office contains prepared file folders, store operating orders and a set of vending machine "trouble-shooting wheels."

A basic list of merchandise provides for the day to day needs of the men at sea, including cigarettes, shaving supplies, toiletries, candy, stationery, and other items.

The Navy Ship's Store Office assists the ship's assigned line officer in setting up his store, and performs such other tasks as reviewing inventory levels and providing continuous technical advice and assistance as required.

Before being made available to all ships without Supply Corps officers the new plan was tried out in a 90-day test on a half dozen ships, three of which had operated under the old procedures. One of the test ships, USS *Dominant* (MSO 431) converted a pint-sized foul weather gear locker into a ship's store.

The convenience to the crew of being able to purchase its everyday personal needs at sea is not the only advantage offered for the store since it is also a source of funds for a shipboard recreation program.

SPECIAL TODAY
Thanks Call Again
PEANUTS, POP-CORN, CHEWING GUM, WHIPS, CANES AND PLAYING CARDS
SHIP'S STORE
OPEN

$70 to about $150 per month.

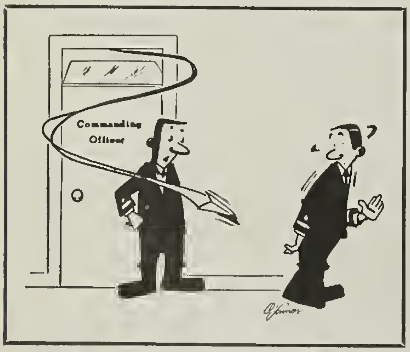
Pensions (boarding houses) are available in Lisbon and Estoril. Good pensions with a reasonable variety of food can be found at a cost of $85 to $100 per month.

Furnishings. Practically all types of furnishings are available locally, but the prices for new items of good quality are high. By making frequent visits to antique and second-hand shops, it is sometimes possible to find good quality furniture which is usually more reasonable and durable than new items made locally.

The following are items you might consider bringing to Portugal: refrigerator; cook-stove; linen and bedding, including inexpensive sheets, pillow cases and towels for use of servants; good beds, because the springs and mattresses made locally may be uncomfortable; portable closets, since most houses do not contain any; screening for windows, if applicable; a good selection of baby furnishings including crib, bathinette and play-pen, if applicable; bathroom fixtures, including medicine cabinet, towel racks and soap dishes; silver, dishes, glassware, a hand-operated ice-cream freezer, kitchenware and supplies; (utensils, cutlery, ovenware, mixing bowls, refrigerator dishes, oil cloth, plastic table mats, bowl covers, scouring pads, dish towels and soap powder. Metal kitchenware is preferable to glassware as kitchen sinks, work tables and kitchen floors are either marble, tile or concrete.

In addition to the above listed items, bring any furniture that you might consider useful. Your furniture may be affected by the Portuguese climate, however. Because of the dampness in winter, furniture may be attacked by mold.

All-Navy Cartoon Contest
Neil F. O'Connor, ENS, USN



"Say, Ed, isn't that your fitness report?"

He Talks Their Way Into the Navy

Jerry G. Arlaud, AA, USN, likes the Navy, and he's not a bit bashful about telling people so. Because of that, the Navy has gained five recruits. Here's how it all happened.

In January 1957, while Jerry was home on recruit leave and proudly displaying his uniform, he dropped in at the Navy Recruiting Sub-Station, Des Moines, Iowa, and volunteered his services to the Petty Officer in Charge, offering to assist with recruiting in any way possible. Result: Before his leave was up he had talked three men into enlisting immediately.

Later, while on leave from Helicopter Attack Squadron Six at NAS North Island, San Diego, Calif., he returned to Des Moines and again showed up at the recruiting station. This time he talked two more men into joining up immediately.

In addition to the five recruits he influenced directly, Jerry also performed a valuable service by assisting the recruiter in his talks with other young men of enlistment age. As a result, the recruiters have suggested that Jerry be given a commendation.

It's easy to see why—when you consider the fact that about 35 per cent of the new men who join the Navy do so because of talks with Navymen or ex-Navymen.

Utilities. City gas, which is expensive but considered less so than electricity, is used for cooking and for heating water. Unfurnished apartments are not equipped with cook stoves or heaters. It is recommended that a gas range with jets adjustable to manufactured and bottled gas be purchased in the United States. As for the heater, it is believed that since gas lines and plumbing are installed for a "geyser" type system, it is probably preferable to buy one locally.

The houses in Estoril are usually equipped with a coal-and-wood-burning range, which is useful for cooking and heating water.

Coal is imported and costs approximately $40 a ton. It is the fuel used for heating in both Lisbon and Estoril. Lisbon houses sometimes have fireplaces and seldom central heating, but in apartment buildings each apartment generally has its individual central heating unit. In the majority of cases, neither method supplies sufficient heat. As a result, you may want to use portable electric or kerosene heaters. Either type of heater should be purchased in the States as they are expensive in Portugal. If the need cannot be anticipated, heaters may be purchased later from a mail order firm in the United States.

Telephone service is sometimes difficult to obtain. The best method is to rent a house or apartment which already has a telephone.

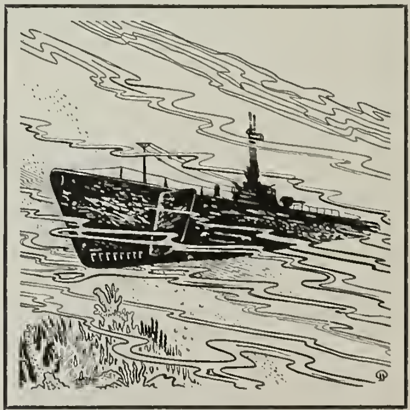
The diversity of electricity has long been a problem in Lisbon. Depending on the section of the city, 110 AC, 220 AC and 220 DC are used. If your refrigerator is 110 AC, it can be used with a transformer. (An electric shop should be consulted to determine a suitable type of transformer.)

City water is fairly expensive.

Shipping and Packing. Strong packing and secure wrapping should be used on all household goods to be shipped. Automobiles may be shipped boxed or unboxed. There are no special restrictions on the size of cartons or lift vans. Commercial storage facilities in Lisbon are expensive.

Sanitation and Health Controls. In the better residential districts, the general level of sanitation is considered good. In other districts, especially older sections of the city, living conditions are crowded and the general level of sanitation poor.

As in many similar places abroad,



"By George! This pen does write under water!"

foreigners are subjected to stomach and intestinal upsets of short duration. There have been no serious epidemics of any kind in the past few years. However, the following contagious diseases are usually present to some degree in Lisbon: meningitis, occasionally scattered cases; tuberculosis, very prevalent; typhoid, always several cases but seldom attains epidemic proportions. In addition there is always a possibility of contracting undulant fever or one or another form of dysentery in this region.

The common cold and mild forms of influenza are fairly prevalent and some people, susceptible to attacks of sinus trouble, are bothered by the dampness.

Children's diseases should be guarded against. Caution should be exercised in selecting maids or nurses because of the prevalence of tuberculosis. Cooks and maids should also be checked to be sure that they are using hot water and soap for washing dishes and utensils. Milk is generally unsafe (unless boiled) because bovine tuberculosis, although much reduced, still exists in the country. Water, if freshly drawn from the tap, is considered reasonably safe. The use of bottled water is recommended in restaurants, hotels and home. A milk pasteurizer is recommended for families with small children, however, powdered milk is usually available at the Embassy Cooperative.

Customs Duties. Under the terms of the bilateral agreement between Portugal and the United States, free entry of automobiles is granted to officers and enlisted men. Entry of the automobile is accomplished by the Embassy Administrative Office through the MAAG Administrative Officer.

Pets are not subject to quarantine, but dogs must have a vaccination certificate against rabies, and cats should have a certificate of good health.

Currency Regulations. There are no limitations on bringing dollars and travelers' checks into Portugal. For making dollar payments in the United States or elsewhere, however, it is advisable to maintain a checking account with a bank in the United States. The escudo is the national currency unit of the country. Normal exchange is 28.60 escudos to $1.00.

Miscellaneous Supplies. Toiletries, cosmetics, household needs and medicines are available but they are expensive. Most persons find it preferable to bring these items with them and to order new supplies from time to time from the States. Baby supplies, such as oil, powder, bottles, sterilizers, and so forth, should be brought.

Food. Food is available in ample variety and quantity. Leafy green and yellow vegetables are abundant during the summer season and are usually available in more restricted selections during other months of the year. Prices are reasonable during the season but are high during off season. Oranges, lemons, bananas and pineapples are usually available throughout the year, while pears, peaches, apricots, grapes, strawberries, plums, figs and apples are plentiful for about three to six months of the year.

The taste locally runs heavily to use of olive oil in foods, and newcomers who find it difficult to adapt to this type of cooking should make provisions with cooks to avoid this problem. Meat and poultry of fair quality and fish of good quality are also usually available. Bread of fair quality is available. Milk of poor quality, delivered to households by vendors in milk cans, always requires boiling. Canned fruits and vegetables, and canned baby foods, are highly limited both in variety and quantity and their prices are high.

Clothing and Shoes. Civilian clothing is required for military personnel while on duty. Uniforms are

WHAT'S IN A NAME

A Ship's Motions

If seasickness has ever made you wish you were a landlubber, then when you're at sea the next time and the Beaufort scale reading is in the neighborhood of nine; and when the idea of chow leaves you cold and your shipmate tells you, "it's all in your head," here are a few thoughts which might take your mind off the subject — on the other hand they might not.

PITCH, HEAVE, SURGE, ROLL, SWAY, YAW, LIST, ... PHOOEY!

There are several ship's motions which contribute to the way you feel. Undoubtedly you've been at the gedunk swapping sea stories and heard some of the men swear that their "bucket rolls even in dry-dock." This may be an exaggeration, but *rolling*—the side-to-side motion of a ship—is so constant in some ships, that it seems never to stop. (The degree to which a ship may roll and still right itself is determined by each ship's own characteristics in addition to many other factors).

The *pitch* of a ship can get you down or give you a lift if you let it. Under extreme sea conditions in the case of lighter ships such as destroyers, the bow may rise out of the water only to come down with a smack which will rattle your teeth. On the downward half of a cycle, the stern may rise out of the water to the point where the screws will be exposed and the boys in the after compartments will have to strap themselves into their bunks.

Unless you stand steersman watches, the *yaw* won't be of much concern to you. This motion is a result of a fast-quartering sea which, when overtaking your ship, will throw it off course, but in passing will tend to pull it back.

More of a state of being than a motion, a ship is said to *list* when it leans to one side and stays there. For example, through some mechanical deficiency, oil is used from fuel tanks on the port side only. The ship then takes on a starboard list, a situation which could prove hazardous in heavy seas. One way to rectify the situation would be to pump water into the port tanks.

A ship's *heave*, surge and sway are less perceptible motions and therefore probably won't add to your queasiness. Just for the record, though, surge is a backward and forward movement, sway is a sideward displacement, and *heave* is an up and down bobbing. These motions are found when moored.

worn only upon visits to Portuguese military installations and on special occasions. However, all military personnel should bring uniforms.

Summer clothing is appropriate in Lisbon during the period from May through September, and winter clothing from October through April. Light gabardines, tropical worsteds, rayons, and even seersuckers, or other conventional materials are used in the summer; and tweeds and other woolens in the winter. In general, the requirements for clothing in Lisbon are not too dissimilar to those in Washington, D.C., but summer nights are much cooler, and winters are milder. Light overcoats are sometimes necessary.

Interested in Phone Patches? Heres How to Get Into the Act

Navymen and scientists wintering over at the seven U. S. bases in Antarctica are still trying to get in touch with more Stateside amateur radio operators — especially those in Naval Reserve training and electronic units (see page 10 for story on Antarctic).

For several more months these men will not be getting any mail, but thanks to "phone patches" they can talk to almost anyone within reach of a telephone. Here is how a patch works:

An amateur radio operator in the States contacts one of the stations in Antarctica (or vice versa). Then, the ham arranges for a telephone operator in his vicinity to rig a patch, a combination of radio and telephone which enables the two parties to talk directly to one another.

One contact made this year which was out of routine channels was with a 26-foot cabin cruiser off the New Jersey coast. Frank and Ruth Leeming, friends of Ionospheric Physicist Carl O. Wyman, stationed at Little America, called a telephone operator from their cabin cruiser via marine radio-telephone. The operator called ham Julius M. J. Madey, of K2KGJ, Clark, N. J. Madey contacted Bobbie F. Grice, RM1, USN, on duty at Little America, and Wyman was called to the radio set to talk with his friends. The system worked.

If you'd like to get in on the act, the call letters of the Antarctic bases are: KC4USA, Little America Station; KC4USB, Byrd Station; KC4USN, Amundsen-Scott IGY (South Pole) Station; KC4USV, Naval Air Facility, McMurdo Sound; KC4USH, Cape Adare Station; KC4USW, Ellsworth Station; and KC4USK, Knox Coast Station.

American women residing in Lisbon dress about the same as women in New York or Washington, D.C. During the summer, there is need for a good variety of cotton dresses, light gabardines, rayons and other types of dresses that launder well. A light top coat or jacket will be useful during the evenings of spring and fall. The general run of clothing worn during the winter is of medium weight. For indoors, where it is often chilly during the damp winter, wool skirts and sweaters will be found comfortable. For comfort's sake, women should bring two or three pairs of low-heeled shoes because the sidewalks in Lisbon are frequently made of small stones which make walking in high heels difficult.

Laundries and dry cleaning establishments exist in Lisbon but they are expensive and work is of uncertain quality. Laundry and most cleaning work is usually performed by servants in the household.

Servants. Servants are generally available at reasonable cost. Salaries for a cook range from 250 to 500 escudos ($8.85 to $17.50) per month; a maid at a slightly smaller salary. A part-time gardener may be employed for 200 escudos ($7) per month, and a part-time laundress for 20 or 30 escudos per day. Experienced Swiss or English nursemaids are available but most American families depend on an extra Portuguese maid at about 300 to 350 escudos a month for the purpose. As a rule cooks and maids reside within the household, and must be provided with uniforms. It is recommended that you bring a supply of uniform and apron material. The uniforms can be made locally at a reasonable price.

Education. In addition to the Portuguese school system, which offers educational facilities at all levels, English and French schools offer training for children from kindergarten through the American equivalent of high school. There are no American schools in Portugal. Americans residing in Lisbon with sons and daughters of college age usually send them to educational institutions in the United States.

Language. English, French and Spanish are used to a limited extent in Portugal. Spanish is usually understood but, in turn, the reply in Portuguese is often confusing. Language instructors are available to military personnel assigned to the MAAG at no cost, but language textbooks must be purchased by the students.

Churches. In addition to Catholic churches throughout the city, there are two Anglican churches, a Scotch Presbyterian church and a Jewish synagogue. There are also Seventh Day Adventists, Baptist, Presbyterian, Conservative Baptist and Evangelical Alliance missionaries.

Hamgrams for Deep Freeze Sailors Hungry for News

The Navymen now wintering over in Antarctica probably won't get their next mail until sometime in October, but thanks to ham radio operators, and especially to Paul Blum of Syracuse, N. Y., they're still able to keep in touch with their families.

Paul is sparkplug of the "Rags" club, which has been a tireless and efficient message center for "Hamgrams" from the men of Deep Freeze. He has spent more time on the air and handled more traffic from Antarctic stations than any other amateur in the United States. And, when not on the air himself, he makes his home and equipment available to other operators in the club so that they can keep the messages flowing.

The men at the bottom of the world are now trying to figure out a way to show their appreciation for the job Paul has done, and they're also trying to establish more contacts with Stateside hams, particularly those running Naval Reserve amateur stations. With Reserve hams all over the country working for them they'd really feel as though they'd just received a letter from home.

Local Transportation. Streetcars and buses are available but, although useful for general transportation and for servants engaged in marketing, they are not considered adequate for going to and from work, because of their heavily overcrowded condition during rush hours. Taxis are numerous and inexpensive and are widely used.

Automobiles. It is desirable to have an automobile in Portugal. The interesting countryside affords a good opportunity to make numerous trips. A car also offers a chance to see something of nearby Spain, which otherwise would be difficult because of lack of comfortable transportation. Most European and American cars can be purchased locally. United States standard makes in the low-price field with low gasoline consumption are preferable.

Gasoline is available to Embassy personnel at a special price of 1.80 escudos a liter (about 25¢ a gallon). Cars must be registered with the local authorities and a driver's permit is required. If you have a current stateside driver's permit, no driving examination is required. It is especially advisable to obtain insurance covering all types of risks. The cost of such insurance coverage is about $120 per year and is obtainable locally. Enlisted personnel may sell their automobiles to other enlisted personnel only. It is advisable to contact your relief, as used cars of enlisted men are always available at a very reasonable price.

Departing officer personnel may sell a car provided arrangements are made to pay the heavy import duty and stiff sales taxes waived for diplomats at the time of entry. After two years of ownership, the duty rate becomes 50 per cent of the established duty.

Sports and Outdoor Life. Portugal offers a wide variety of sports and outdoor life for both adults and children. Because of favorable weather during spring, summer and fall, beaches, tennis courts, golf courses and other types of outdoor activity have a wide appeal.

All-Navy Cartoon Contest
Lindy U. Johnson, YN1, USN

"Dagblastit Smedley—get back in line!"

Boating is available along the Tagus estuary. Most pleasure craft are privately owned but it is possible to use sail boats by joining one of the boating clubs. Spectator sports include soccer, track meets, automobile meets, bullfights, tennis matches. There is a series of winter concerts each year.

Sea fishing is available within reach of Lisbon, but river and brook fish are not plentiful.

There are several tennis courts well distributed throughout the area. Rackets, balls and shoes should be brought.

There are stables in Lisbon and at Estoril where horses may be rented by the day. Riding boots or jodhpurs should be brought along.

Bicycles are available in Lisbon and Estoril for approximately 25¢ per hour and may be used for taking trips to Guincho, Sintra and other nearby places.

Entertainment. The vicinity of Lisbon offers plenty of opportunity for rest and recreation. Estoril, with its casino, golf course, tennis courts and beaches, is only half an hour's drive over an excellent road. Together with other points along the coast it may also be reached by electric railway from Lisbon.

A number of interesting places are within easy reach of Lisbon for short weekend trips, among them being Fatima (a famous Catholic shrine). Portinhi d'Arrabida, Batalha, Nazare, Tomar and Evora are also in the vicinity. Most of them possess comfortable hotels. The southern province of Algrave and northern Portugal, particularly the Province of Minho, and the Serra da Estrela region, offer interesting and attractive changes of scenery for local leave.

Paris is 36 hours by train (four times a week) and about five hours by air. Madrid can be reached in a long overnight train trip (three times a week), in less than two hours by air, or a full day driving by car.

For info on other areas write Chief of Naval Personnel, (attn: Pers G221), Washington 25, D. C.

Course on Medical Service In Joint Overseas Operations

A new correspondence course, ***Medical Service in Joint Overseas Operations*** (NavPers 10796) is now available at the Naval Medical School. This course is designed for Regular and Reserve officer and enlisted personnel of the Medical Department.

It discusses how the military services pool their human and material medical resources in an overall mission, and how they work together in a joint over-seas operation under a unified command. The course consists of two assignments, evaluated at six points credit for purposes of Naval Reserve retirement and promotion.

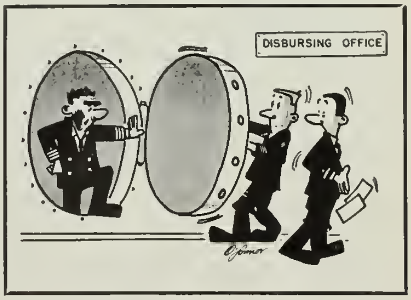
Applications should be submitted on Form NavPers 992 (Rev 10/54 or later), with appropriate change in "To" line, forwarded via official channels to the Commanding Officer, U. S. Naval Medical School, National Naval Medical Center Bethesda 14, Md.

Three More Emergency Service Ratings Disestablished

Three emergency service ratings have been disestablished by the Secretary of the Navy on the recommendation of the Permanent Board for Review of the Enlisted Rating Structure. Ratings eliminated are, Commissaryman at the E-6 level, Parachute Rigger S (Survival) and Parachute Rigger M (Maintenance) at the E-6 and E-7 levels.

Although the ratings are being disestablished, BuPers Notice 1223 states that the personnel concerned will continue to advance in their present ratings, and will not be changed from one rating to another until specific instructions are issued regarding such changes.

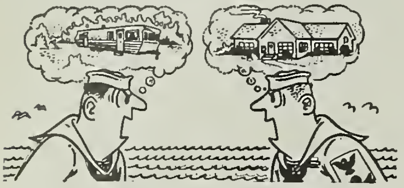
All-Navy Cartoon Contest
Neil F. O'Connor, ENS, USN



"I assume you all had a pleasant weekend!"

Moving into a Trailer? Here's Some Advice from an Expert

Just like owning a car or a house, buying a trailer can be an expensive proposition if you're not careful. Nevertheless, many a Navyman with a family has felt that the high monthly payments for five or six years are more than offset by the knowledge that they have a place to live and are independent of high rents.

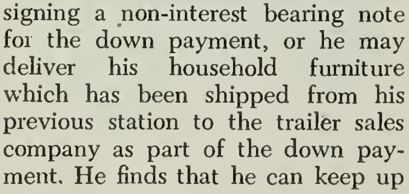


You've heard most of the arguments brought up in many a bull session. The pro-trailerites maintain that, after paying $100 a month (or more) for five years or so, they have a real asset which can be used as a home, can be converted into cash, used as a down payment on a houseful of furniture, or as a step toward a new and larger trailer. If you rent your home, they argue, you have nothing but rent receipts to show for your money.

Those on the other side point out that trailer living is only cheaper after your trailer is fully paid for and your only expenses are for trailer lot rental and utilities.

The first experience as a trailer owner is usually the most expensive, and can be disillusioning. If you succeed in keeping up your payments to the end of your obligation, fine. If not, you're headed for expensive trouble.

For example, a Navyman newly arrived in an area, after experiencing a whopping hotel bill finds that he can buy a trailer home for his family sometimes without using cash by signing a non-interest bearing note for the down payment, or he may deliver his household furniture which has been shipped from his previous station to the trailer sales company as part of the down payment. He finds that he can keep up his monthly payments until the time he is transferred, when he runs into a problem because his family plans to go back home (or go with him overseas) and give up trailer life. Or his payments may be just too high for him to keep up.



In such a case his separation from trailer life can be bitter. Usually, because of its easy down payment policy, the sales company from which he bought his trailer does not have enough money to hang on to a repossessed trailer until it can be resold at a favorable price. The sales company must sell it immediately without any consideration of the purchaser's investment. (Banks and finance companies do not sell trailers and trailer sales companies do not, as a rule, finance trailers.)

Unless the trailer sales company can immediately resell the trailer, rent it, or find some means that will make the bank or finance company happy, the Navyman finds he is lucky if he loses nothing but the trailer. It is quite possible that he might still be compelled to continue his payments on the trailer and also, on the note he gave as a down payment. Life will have few luxuries to offer for some time in the future and his wife will undoubtedly have a few comments to make about his skill in high finance.

Here are a few suggestions to help *you* avoid this grim fate:

- Don't buy or sell a trailer without receiving advice from other, experienced trailer owners. On stations that have a large trailer population, the Housing, Personnel or Legal officers—or all three—should be able to help you.
- If you have to give up your trailer, don't abandon it without making every effort to resell or rent it. Discuss the matter with the Legal Assistance Officer, and you may find a happier solution by talking it over with the trailer sales company. Given a little time, they may help you recover some of your investment.
- If you are not SURE that you can keep up your payments, don't buy a trailer simply to reduce your immediate living expenses. The loss which you may suffer eventually may be several times the additional hotel costs you may have paid until housing became available.
- In spite of what the salesman may say, don't expect the trailer company to make any more than emergency repairs. The manufacturer's guarantee is usually made good by shipping the defective part and, sometimes, the whole trailer back to the plant.
- Don't buy a trailer (or almost anything else) by simply signing an agreement to pay a certain sum each month. Read your contract. Very often, items that should have been included in the sales price, such as jacks, oil and gas tanks, and sewer connections, are added as extras.
- Don't carry your financing with a bank or finance company that, in addition to regular insurance charges, requires road insurance even when the trailer is not in motion. This sometimes doubles your insurance charges and always increases your monthly payments.

- Don't agree to a seven-year contract if you can swing one for four or five years. You pay interest on the original amount of money borrowed every year the contract is in force. (For example: If your original balance due was $5850 and your payments were $97.50 per month, you only owed $1170 at the beginning of your last year of payments. Yet, your original balance due included a $270 interest charge on this $1170. That's interesting interest.)
- Don't offer your household furniture as part of the down payment unless you KNOW you are going to continue the payments. You may need your furniture again. Orange crates are hard to sleep on.

Here are the details of a typical

trailer deal. The buyer made a number of mistakes, described below.

Purchase price of trailer	$5695.00	*(1)*
Charge for sewer connection	17.60	*(2)*
Charge for six jacks	30.00	*(3)*
Credit report	5.50	*(4)*
Insurance	395.50	*(5)*
Sales Tax (State)	115.42	*(6)*
Actual total cost of trailer	$6271.77	*(7)*
Down payment (Furniture valued at $866, plus note)	1671.77	*(8)*
Balance due finance company before interest	$4610.00	
Five years' interest @ six per cent (added immediately)	1383.40	*(9)*
Total amount due finance company	$5993.40	*(10)*
Monthly payments for five years	99.86	*(11)*

Here's an expert's comments on these figures:

1. This is the sale tag price of the trailer.

2. It is possible that this could have been included in the sale tag price. Depends upon local practice.

3. The expert says this should have been included as part of the sale tag price.

4. This is too small to be a real charge, the expert says.

5. Regular insurance could have been obtained for about $190, but the finance company probably requires road insurance even when the trailer is not in motion.

6. Each State has a different sales tax. Some have none.

7. This amount might have been reduced considerably if the buyer had insisted that comments (2) through (6) be verified.

8. If you abandon your trailer, this down payment is lost forever, except that the note for $805.77 may be negotiated or considered when the dealer resells it.

9. This amounts to six per cent or $276.60 for each year the contract runs. In other words, if the last year of your payments total $1200, you are paying 26.05 per cent interest. If you can afford a five-year contract, don't accept one for six years.

10. This would have been $6270 for a six-year contract, or $80.13 per month for 72 months.

11. Add to this $30 per month for trailer lot rental and utilities and $50 per month on the non-interest bearing note, and you'll find that it costs you $179.86 per month to live in this trailer until the note is paid up, then approximately $130.00 for the remainder of the five years.

Applications Open for Change To Special Duty in Law

Ensigns, LTJGs and LTs with a law degree from a law school accredited by the American Bar Association who are members of the bar of a Federal Court, or of the highest court of a state or territory of the U. S., or District of Columbia, may apply for Special Duty (Law) designations (Code 1620) in the Regular Navy.

Applications must be submitted on NavPers 953 in time to reach the Chief of Naval Personnel (Pers B1136) not later than 1 Nov 1957. The following documents should accompany the application:

- Special Report of Fitness (NavPers 310).
- Report of Medical Examination (Standard Form 88) in duplicate, with report of Medical History (Standard Form 89).
- Educational transcripts — one copy from each college or university attended, and evidence of receipt of law degree from a law school accredited by the American Bar Association. Transcripts need not be submitted if already on file.
- Certificate of evidence of admission to practice before a Federal Court of a state or territory of the U. S., or in the District of Columbia. This need not be submitted if already on file.

All applications will be acknowledged immediately upon receipt and will be referred to a special selection board which will convene in November 1957. Applicants will be advised of their selection or nonselection as soon as possible after the board meets.

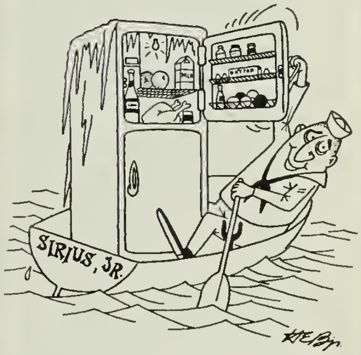
Officers selected will be appointed Special Duty Officers (Law) (Code 1620) in their current grades and dates of rank as soon as their availability for reassignment will permit. No professional exam required.

HERE'S YOUR NAVY

The Navy's newest store ship USS *Sirius* (AF 60) is more than just a "reefer". It's a dry provisions replenishing ship as well.

Just returning from her first Pacific Fleet supply mission for the Navy, the 13,682-ton ship is no newcomer to the Pacific. She's a veteran of more than 140 crossings.

Built in 1942 for the Maritime Administration, *Sirius* (ex-ss *Tradewind*) was transferred to the Navy last year as a replacement for the old USS *Polaris* (AF 11).



Uniquely, *Sirius* was re-commissioned 12 Jan 1957—the same day *Polaris* was retired. In addition to getting a new name and donning Navy paint, the ship was fitted out with the latest in galley, mess hall and office space for her 220-man crew. The efficiency-inspired outfitting included the transfer of almost half of *Polaris'* crew and equipment, which represented a savings to the Navy of almost $100,000.

Sirius is only the third refrigerator ship in Navy annals to carry a consolidated load of both refrigerated "freeze" and "chill" as well as dry provisions for replenishing Navy ships at sea.

Her dry provisions are stored in her Number Four hold which as a "spar" deck is installed across the midpoint of the lowest part of the hold. This extra deck—much like an added shelf in a kitchen cabinet - - - provides the added work space and accessibility needed to issue the dry stores that Fleet customers demand.

During her initial Navy run, the 460-foot reefer off-loaded hundreds of tons of groceries across white-capped waves to the pitching decks of ships operating at sea, resupplied two other refrigerator ships—a station ship at Sasebo, Japan, that waits for the arrival of her Fleet customers - - - and a sea-going "deep freezer" that operates right along with Fleet units.

How to Make a Round Trip on Leave and Liberty

Hot weather is here and like millions of others, you'll be 'hitting the road' to the beaches, mountains or some other retreat in an all out effort to beat the heat.

No matter if you're going on a lengthy leave, weekend jaunt or Sunday afternoon drive, here's a set of 11 General Orders for the Highway to read, review and remember, before getting behind the wheel of an auto:

1. To take charge of my vehicle and all personal property and lives therein.
2. To drive my car in a safe and sane manner, observing everything that takes place within sight from all directions.
3. To report all defects in my vehicle to a mechanic for repair.
4. To repeat no violations of road courtesy previously committed by myself or those observed being committed by others.
5. To quit my post behind the wheel of my car when I have become sleepy or have otherwise become a potentially dangerous driver.
6. To receive and obey all driving regulations, speed limits and common sense restrictions on driving habits.
7. To talk to no one while I am driving by turning my head to the side or rear.
8. To give the alarm to motorists behind or in front of me, by signal, hand or otherwise, showing my intention to stop, turn or slow down.
9. To call emergency vehicles and give what other assistance I can, should I come upon a fellow motorist in need of help.
10. To salute all other drivers by extending driving courtesy at all times and under all conditions.
11. To be especially watchful at night, keeping in mind that night driving presents many problems and dangers not encountered during the daylight hours.

Last year alone, about 40,000 deaths were caused by traffic accidents. Of this number 31,800 were due to the actions of drivers. And these actions also accounted for 1,925,000 of the approximately 2,368,000 injuries suffered in such mishaps.

The greatest cause was speeding beyond the limit allowed by law. Speeding alone took a toll of 13,830 lives, or 43.5 per cent of the total number of traffic fatalities.

Driving on the wrong side of the road brought death to 5310 victims —16.7 per cent.

In cases where drivers did not have the right-of-way the deaths amounted to 3750 or 11.8 per cent.

The death toll under "drove off the roadway" was 3910 and from reckless driving, 3310.

Other accidents ending tragically were: cutting in, 250 deaths; passing on curve or hill, 450; failing to signal, or improper signalling, 480; cars running away, with no driver, 30; and miscellaneous, 290.

Brain Food Is Popular At NAS Corpus Christi

As you can see by the article about Special Services (starting on page 24), the Navy has much to offer when it comes to leisure time activities.

The Naval Air Station at Corpus Christi, Tex., is no exception and it, too, goes all out with its Sports and Recreation Program. However, Navy and Marine Corps personnel on board do not devote all of their spare time to recreation.

More than 83 per cent of all the enlisted personnel assigned to NAS Corpus Christi are enrolled in Navy, USAFI or some other form of educational training.

Four of the station's 16 departments—Medical, Dental, Chaplain's Office and the Marine Barracks—which have a combined total of more than 180 enlisted men assigned, boast of 100 per cent participation.

The air station's largest department, Operations, has 398 of the 422 men assigned, hitting the books.

Uniform Overseas Tours For All Services Ordered By Department of Defense

The length of your tour of shore duty outside the United States and the movement of your dependents overseas may be affected by new Department of Defense regulations.

The regulations, directing the services to standardize their overseas shore duty tours and their rules on overseas transportation of dependents, have been in effect since 6 Jun 1957. In compliance with them the armed forces are now working out implementing directives along these lines:

- ***Duty Tours***—All the services are to use the same methods of computing overseas time and to have uniform length of tours. Readjustments in present tours, made necessary by the new regulations, are to be completed not later than 30 Jun 1958.

Shortened tours will be prescribed for the less desirable locations.

Where practicable, tours will be of uniform length for personnel of different services stationed in the same area.

Standard overseas tours will be from 12 to 36 months long.

Prescribed tours will be reduced approximately one third for individuals not accompanied by their families. (However, no overseas tour is to be shorter than 12 months.)

- ***Dependents***—Dependents who do not have authorized military dependency status overseas are entitled only to those privileges to which they are entitled by law. (Medical service is authorized.)

Unaccompanied military and naval personnel who do not have enough obligated service to cover the prescribed overseas tour will not be authorized to move their dependents overseas unless they voluntarily agree to remain in service long enough to complete the tour.

Overseas station allowances for dependents will be paid only to those who are normally entitled to transportation of dependents at government expense and authorized to have dependents present in the area. (Servicemen already receiving these allowances, but who lose their eligibility under the new regulations, may continue to receive their allowances until they complete current overseas tours.)

Personnel in pay grade E-4 who have less than four years' service and lower pay grades, or those who are otherwise ineligible to have their dependents join them overseas, will no longer have overseas transportation furnished to their dependents on a space-available basis. However, dependents who are already overseas will be furnished return transportation on this basis.

Servicemen who do not have at least 12 months remaining on station after their dependents arrive will not be allowed to move their dependents overseas at government expense.

Information on the prescribed length of overseas tours will be issued as soon as possible.

For the most part, only those personnel leaving the continental United States after 6 Jun 1957 will have the length of their tours modified because of the new regulations. However, some readjustments may be made in tours begun before that date in order to effect a smooth transition.

The uniform tour lengths are applicable only to overseas shore-based personnel. Sea duty tours for Navymen in units home-ported outside the continental United States are not affected. However, the new regulations regarding dependents' transportation will generally apply to them, as well as to shore-based servicemen.

Here's How to Change Rate To Nuclear Weapons Man, Exams and Courses Set Up

The first examination for change in rating or change in rate and concurrent advancement in the newly established *Nuclear Weapons Man* rating will be given in February 1958.

Eligible personnel who hold special program codes 9924, 9925, 9929 and 9930, as well as graduates of the nuclear weapons assemblyman and assembly technicians course may be recommended by their commanding officer to participate in the NW examination. ETs and ATs may not take this examination.

According to BuPers Inst. 1440.22, the Chief of Naval Personnel will control the initial input of senior enlisted men in the NW rating in order to insure that reasonable advancement opportunities will continue to exist for lower pay grade personnel.

Study guides and requirements for advancement for all pay grades of the new NW rating will be available in October.

Enlisted personnel are currently being trained initially for the nuclear weapons program in the assemblyman and assembly technician courses at the Sandia Air Force Base in New Mexico.

The two courses will be revised and a new Class "A" type school for Nuclear Weapons Men will open early in 1958. When the need arises, Class "B" and "C" courses will also be established.

Course Prepares Journalists For Independent Duty

A new course designed to prepare senior enlisted journalists for duty as public information assistants and for independent duty has been established at the Naval Training Center, Great Lakes, Ill.

The first class convened on 29 July, with additional classes being scheduled for 21 Oct and 13 Jan 1958.

Journalists in pay grade E-5 and above may attend the new eight-week course.

Each class is limited to 15 students. See your education officer.

HOW DID IT START

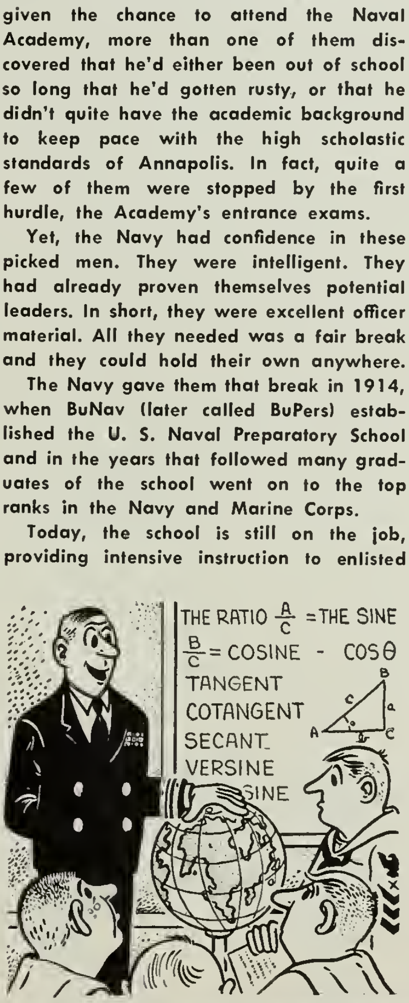
Naval Prep School

Years ago, when enlisted men were first given the chance to attend the Naval Academy, more than one of them discovered that he'd either been out of school so long that he'd gotten rusty, or that he didn't quite have the academic background to keep pace with the high scholastic standards of Annapolis. In fact, quite a few of them were stopped by the first hurdle, the Academy's entrance exams.

Yet, the Navy had confidence in these picked men. They were intelligent. They had already proven themselves potential leaders. In short, they were excellent officer material. All they needed was a fair break and they could hold their own anywhere.

The Navy gave them that break in 1914, when BuNav (later called BuPers) established the U. S. Naval Preparatory School and in the years that followed many graduates of the school went on to the top ranks in the Navy and Marine Corps.

Today, the school is still on the job, providing intensive instruction to enlisted men who've been selected to compete for admission to the Naval Academy. In addition, the school is now a training ground for EMs who've been provisionally selected for the NROTC program, which enables successful candidates to obtain four-year college educations and commissions in the Regular Navy and Marine Corps.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The school is situated at the U. S. Naval Training Center, Bainbridge, Md., on a site overlooking the Susquehanna River. It was originally built back in 1902 as a private prep school, and much of the campus atmosphere still prevails, even though the instructors are Navy and Marine Corps officers and the students march almost everywhere they go. The Annapolis hopefuls attend the school from September to May. In the summer months the NROTC candidates take over during the College Preparatory Session.

The school's program keeps both groups busy. It is divided into three main phases—military, academic and athletic. The military phase includes drills, regular inspections and discipline. The academic phase (for the Annapolis candidates) is geared to the Academy's entrance exams and course of study, stressing algebra, plane geometry, English, U. S. history and physics. (The College Preparatory Session, being much shorter, places its emphasis on English, mathematics and physics.) The athletic phase of the program is flexible enough so that every student may find a place in it, whether he likes football, softball, cross-country running, fencing or what have you.

Students at the Prep School drill hard, study hard and play hard, but thanks to this training, it's now a lot easier for them to make the grade as the admirals of the future.

Latest List of Movies Available for Distribution To Ships and Bases Overseas

The latest list of 16-mm. feature movies available from the Navy Motion Picture Service, Bldg. 311, Naval Base, Brooklyn 1, N.Y., is published here for the convenience of ships and overseas bases. The title of each picture is followed by the program number.

Those in color are designated by (C) and those in wide-screen processes by (WS). Distribution began in June.

These films are leased from the movie industry and distributed free to ships and most overseas activities under the Fleet Motion Picture Plan.

Cockleshell Heroes (814) (C) (WS): Drama; Jose Ferrer, Trevor Howard.

Drango (815): Adventure Drama; Jeff Chandler, Joanne Dru.

The Incredible Shrinking Man (816): Horror; Grant Williams, Randy Stuart.

Phantom Stagecoach (817): Western; William Bishop, Kathleen Crowley.

Slander (818): Drama; Van Johnson, Ann Blyth.

Four Girls in Town (819) (C) (WS) Drama; Cornel Borchers, Errol Flynn.

A Woman's Devotion (821): Drama; Ralph Meeker, Janice Rule.

Running Target (822) (C): Drama; Doris Dowling, Arthur Franz.

Something of Value (823): Drama; Rock Hudson, Dana Wynter.

Mister Cory (824) (C) (WS): Drama; Tony Curtis, Martha Hyer.

Odongo (825) (C) (WS): Adventure Drama; Rhonda Fleming, MacDonald Carey.

Wings of the Eagles (826) (C): Drama; John Wayne, Maureen O'Hara.

The Shadow on the Window (827): Drama, Betty Garrett, Phil Carey.

Men in War (828): Drama; Robert Ryan, Aldo Ray.

The Girl Can't Help it (829) (C) (WS): Comedy; Tom Ewell, Jayne Mansfield.

Hellcats of the Navy (830): Drama; Ronald Reagan, Nancy Davis.

The Big Caper (831): Drama; Rory Calhoun, Mary Costa.

No Place to Hide (832): Drama; David Brian, Marsha Hunt.

The Rainmaker (833) (C): Comedy-Drama; Burt Lancaster, Katherine Hepburn.

QUIZ AWEIGH ANSWERS

QUIZ AWEIGH IS ON PAGE 9

1. (a) Hole-in-one. Of the 210 achievement awards presented, more than 160 of them have been for "aces."

2. (b) You must apply to the Bureau yourself via your CO.

3. (a) Submarine. USS *Sea Fox* (SS 402) was the last recipient, as the trophy was withdrawn from competition during the Korean conflict and has not been placed in circulation again.

4. (b) USS *Forrest Sherman* (DD 931), the first vessel of the Navy's first new class of destroyers built since WW II. Newer types have been built since *Sherman*.

5. (a) Three five-inch guns, one set of four torpedo tubes and four three-inch antiaircraft guns.

Housing for Navy Families on Guam Makes Progress

A $17 million housing replacement program, started in January 1953 on the 30-mile-long, 6-mile-wide island of Guam, is near completion.

As each of the 1356 proposed units go up and Navy families move in, temporary living quarters, which were mostly quonset huts, are being torn down.

The houses are being built on an assembly line basis by MCB-10, and have one or three bedrooms.

Units and their location are NAS Agana, 380; NRS Barrigada, 16; NCS Finegayen, 212; Naval Hospital, 60; Tipalao, 304; Sumay, 132; Nimitz Hill, 80; and Apra Heights, 172.

All-Navy Cartoon Contest
Billy L. Peoples, AM1, USN

"This baby is going to revolutionize naval medicine."

Instructor Duty Billets Are Open at Many Training Activities If You're Eligible

There's a continuing need for instructors in naval training activities. If you're qualified, you may find yourself teaching at any of the schools in 15 different types of training activities.

You must have the following qualifications to be eligible:

- An interest in training and a desire to serve as an instructor.
- Leadership ability, ability to work with others under supervision and ability to exercise sound judgment.
- A clear record.
- Ability to speak clearly.
- Military bearing and deportment.
- GCT of 55. (GCT scores under 55 may be waived for otherwise qualified candidates when waiver is recommended by their CO.)
- Considered a good security risk by commanding officer.

You must also meet the sea duty requirements for shore duty.

Assignments are available at Class A, B, C and P naval schools and functional training activities; recruit training commands; naval retraining commands; officer candidate schools; NROTC units; honor naval schools; merchant marine academies; aviation schools under Chief, Naval Air Technical Training Command; Fleet training centers; Fleet sonar schools; Fleet air defense training centers; Fleet gunnery schools; ASW tactical schools; submarine school.

Requests for BuPers instructor duty may be submitted via your commanding officer direct to the Chief of Naval Personnel (Attn: Pers B2134). Until your segment of the Shorvey-Seavey program goes into effect, submit your application on the Instructor Duty Request Card, NavPers 1247 (Rev. 6-53). (Segment 3 becomes effective 1 Oct 1957; Segment 1 on 31 Jan 1958 and will be made on the basis of your Segment 2 on 1 Jun 1958. Selections rotation data card when your Seavey segment becomes effective.)

Additional information—including a complete list of the types and locations of BuPers-controlled instructor duty—may be found in BuPers Inst. 1306.22C, which is available at your ship or station.

DIRECTIVES IN BRIEF

This listing is intended to serve only for general information and as an index of current Alnavs and NavActs as well as current BuPers Instructions, BuPers Notices, and SecNav Instructions that apply to most ships and stations. Many instructions and notices are not of general interest and hence will not be carried in this section. Since BuPers Notices are arranged according to their group number and have no consecutive number within the group, their date of issue is included also for identification purposes. Personnel interested in specific directives should consult Alnavs, NavActs, Instruction and Notices for complete details before taking action.

Alnavs apply to all Navy and Marine Corps commands; NavActs apply to all Navy commands; BuPers Instructions and Notices apply to all ships and stations.

Alnavs

No. 19—Announced the convening of a selection board to recommend officers in the grade of captain on active duty for promotion to the grade of rear admiral.

No. 20—Announced approval by the Secretary of the Navy of the report of a selection board which recommended USN warrant officers for promotion to the grades of chief warrant officer, W-4, W-3 and W-2.

No. 21—Requested early forwarding of financial returns by Navy and Marine Corps disbursing officers on board ships and at overseas stations.

No. 22—Limited financial obligations which may be incurred pending apportionment of appropriations for fiscal year 1958.

BuPers Instructions

No. 1120.18D—Gives eligibility requirements and processing procedures for the Integration, LDO and Warrant Officer (W-1) Programs.

No. 1120.28—Announces a new Law Specialist Program for active and inactive Reserve officers.

No. 1130.4D—Gives instructions concerning the enlistment of active duty Reserve personnel in the Regular Navy.

No. 1220.9A—Places the *Manual of Navy Enlisted Classifications* (NavPers 15105A) and the revised Navy Enlisted Classification (NEC) System in effect.

No. 1500.25C—Lists convening dates for classes at training activities under the management of the Chief of Naval Personnel and for schools of other services in which the Chief of Naval Personnel fills established student quotas.

No. 1812.1—Sets forth new procedures regarding choice of final duty station and application for non-disability retirement by enlisted personnel nearing the completion of 30 years' active service.

No. 1820.1B—Gives information on non-disability retirement with pay of officers and enlisted personnel of the Naval Reserve and former officers and enlisted personnel of the Naval Reserve.

No. 3590.2D—Lays down rules for the selection of outstanding Reserve divisions which compete for national trophies in various programs.

No. 5321.2C—Revises instructions applicable to officers and enlisted allowances and complements.

No. 7220.17—Points out local sources of information to be used in determining the cumulative service of enlisted personnel.

BuPers Notices

No. 1306 (31 May)—Directed Change No. 1 in BuPers Inst. 1306.56, which concerns the definition of types of quotas issued for enlisted personnel being assigned to service schools.

No. 1410 (1 June)—Announced Change No. 8 to the Manual of Qualifications for Advancement in Rating (NavPers 18068, Rev.) and listed the ratings affected by the change and resultant revisions in the list of *Training Cources and Publications for General Service Ratings* (NavPers 10052E).

No. 1120 (5 June)—Invited applications from permanently commissioned USN line officers not above the grade of lieutenant for designation for Special Duty (Law) (Code 1620) in the Regular Navy.

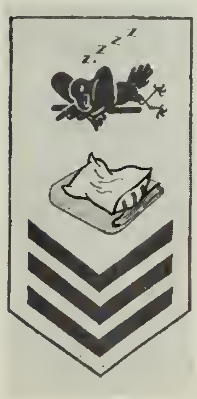
No. 1743 (7 June)—Announced the Jewish High Holy Days to be celebrated in September and October.

No. 1210 (10 June)—Pertained to Change No. 3 in BuPers Inst. 1210.4A, which concerns billet and officer designator codes.

No. 1223 (10 June)—Announced disestablishment of the emergency service ratings of commissaryman at the E-6 level, parachute rigger S (Survival) at the E-6 and E-7 levels and parachute rigger M (Maintenance) at the E-6 and E-7 levels.

Sleeping Crow Insigne Makes a Hit in Yorktown

The new and firmly unofficial specialty rating of Rackman (RK) has undergone severe tests and, unofficially, has become "recognized" on board USS *Yorktown* (CVA 10).



The new rating was pioneered by Robert M. Dickover, RKC (who has spent years in compiling research) and Richard J. Kinter, RKSN, who woke up long enough to design the new rating badge. It features a sleeping crow plus pillow and folded blanket.

Practical factors are being completed at an unbelievable rate according to Education and Training Office personnel on board *Yorktown.* Many petty officers who have always been rackmen at heart, are now jamming the E&T office to qualify for a change from their present rates.

Qualifications for the new rating are not easy. One of the primary requirements is the ability to remain flat on your back for 36 consecutive hours. Whether or not it can be done has started many a discussion among shut-eye artists.

Ramifications are many. As soon as the word was out, some men on board *Yorktown* initiated an investigation into the possibility of establishing some sort of LDO counterpart. Many aviators started a campaign to have an aviation rackman (RAK) rating established. Others, to see if they could possibly qualify, just turned in.

Will the new RK rating have any effect on the rate of reenlistments among first cruise men? Many believe that it will. In fact, they foresee the day when the Navy will have to turn down men who desire to enlist—especially for the RK rating.

One thing is known for sure. No Class A school will be established, at least for the present, as it is felt that opportunities for on-the-job training are more than adequate.—D. A. Vernon, JO3, USN.

BOOKS

FACT SUPPLANTS FICTION IN THIS MONTH'S CHOICE

YOU MAY HAVE NOTICED that nonfiction has taken strong precedence among the books selected for review by the Library Services Branch in recent months. The reason is obvious. Their subject matter is so interesting and the contents so well written that they equal or surpass much of the current fiction.

Consider, for example, a few included in this month's selection: The World War II sub that sailed the Mediterranean with two COs—one British and one American; sailing ship warfare from the days of the Dutch "Sea Beggars" to Perry on Lake Erie; a collection of incidents which will ultimately be the basis of South Pacific folklore. Then there is the type of U. S. Navy history in which the author, instead of politely referring to a general's "dubious tactical judgment," simply calls him a muttonhead.

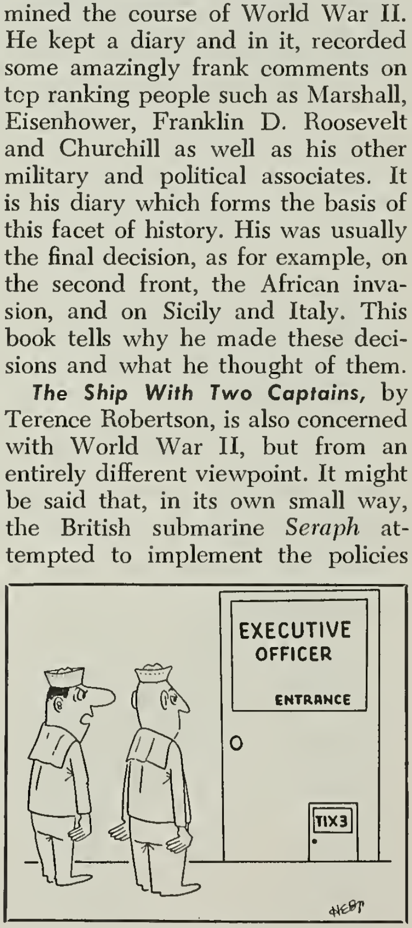
Broadsides and Boarders, by Marvin H. Albert, tells of sailing ship warfare—one of history's shortest and most significant chapters. The author makes the distinction between sailing ships (and galleys) merely used as transportation for armed men and the use of ships themselves as instruments of warfare. Combat with cannon under sails lasted a relatively short time—not much more than 300 years. According to Albert, it started with the Dutch in their struggle against Spanish domination in 1572 and had ended by the time of our own Civil War. But in this brief time, sailing men-of-war changed the course of history and created a new balance of power that shaped much of our modern world.

The author tells of this story through a handful of sea captains who were lucky and successful. The list includes such men as Nelson and Drake, Van Heemskerck, Suffren, John Paul Jones and Stephen Decatur. Through his skill, such phrases as "Hold your fire till you hear the crash!"; "No captain can do very wrong if he places his ship alongside that of an enemy"; and "I have not yet begun to fight," assume new life and meaning.

In **The Compact History of the United States Navy,** the late Fletcher Pratt tells the story of the U. S. Navy itself: How it began, what it has been and what it is today, as only he can. He tells, too, the story of the American sailor: who he has been and who he is today, where he came from at first and where he comes from now, what he has done to the Navy and what the Navy has done to him. The book is an all-time naval review in which almost two hundred years of American history passes by, easily and effortlessly, in their relationship to American ships and sailors. From the privateers and their men without uniforms to the atomic-powered ships now being built and their crews of skilled technicians, this is a well told story of the U. S. Navy—afloat, ashore, underwater and in the air. Vividly illustrated by Louis Priscilla.

The Turn of the Tide, by Arthur Bryant, is more like straight history. It is based on the diaries of Field Marshal Lord Alanbrooke, chief of staff of the British forces, and an almost unknown general whose decisions on strategy frequently determined the course of World War II. He kept a diary and in it, recorded some amazingly frank comments on top ranking people such as Marshall, Eisenhower, Franklin D. Roosevelt and Churchill as well as his other military and political associates. It is his diary which forms the basis of this facet of history. His was usually the final decision, as for example, on the second front, the African invasion, and on Sicily and Italy. This book tells why he made these decisions and what he thought of them.

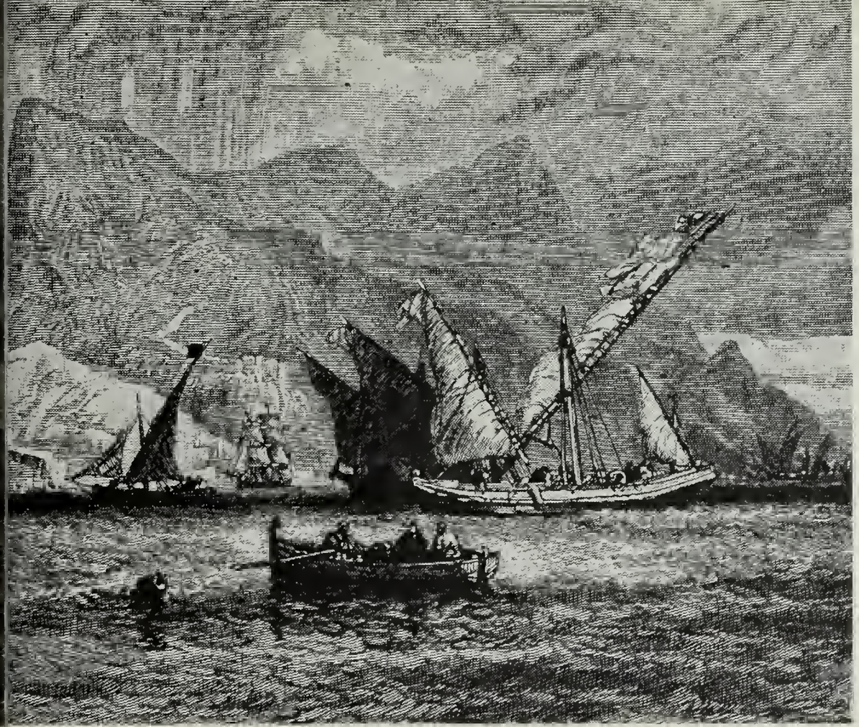
The Ship With Two Captains, by Terence Robertson, is also concerned with World War II, but from an entirely different viewpoint. It might be said that, in its own small way, the British submarine *Seraph* attempted to implement the policies determined by Alanbrooke. Whatever might be thought about her divided command, it must be admitted that *Seraph* got around. Launched in 1942, *Seraph* is alleged to have fired her first shot in anger at a whale under the misapprehension that it was either the *Scharnhorst* or *Gneisenau,* famed German battleships. On her later assignments, she could not afford to indulge in mistaken identity. Her reconnaissance of the coast of Algeria helped the Allies to decide to make the North African landings. After she ferried Mark Clark to North Africa, she was dispatched to pick up Giraud out of France to lead the anti-Vichy forces. As Giraud was suspicious of the British, he would agree only to be picked up by an American sub. None were available so a certain Captain Jerauld Wright, USN, who was to achieve later fame and responsibility was named skipper of the freshly recommissioned USS *Seraph.* Later, as HMS *Seraph,* the sub escorted the corpse known as "The Man Who Never Was" into Spanish waters. *Seraph* is still afloat today, the oldest submarine in the Royal Navy, after surviving the landings at Sicily where she served as a guide and beacon ship. If a novelist were to attempt to fictionize her adventures his efforts would be rejected as "too improbable."



"That new exec always makes me feel so small."

Captives of Korea, by William L. White, is something else again. Plenty of the most difficult kind of heroism, but it doesn't make pretty reading. It tells what happened to our men when they were captured in Korea and compares our treatment of the captured enemy and the enemy's treatment of our men.

James A. Michener and A. Grove Day, in **Rascals in Paradise,** tell true tales of high adventure in the South Seas ranging from Peru to China and Hawaii to New Zealand, and touching all the glamorous islands in between. The rascals, rogues and romanticists they describe include a British Navy officer; a Spanish lady explorer; a Chinese-Japanese pirate; an Australian wanderer who has never been excelled in his writing about the Pacific; a French nobleman who was a swindler; an English privateersman who became an island chieftain; a slave-driving bully; a politician who turned confidence man; a painter; and a psychopathic Nantucket whaler. What chance does fiction have?



ALL HANDS SPECIAL SUPPLEMENT

"-- and see the world--"

(1872)

Gibraltar, Suez, Singapore, Bangkok, Tokyo. You've probably visited one or more of these ports or, perhaps, you've participated in one of the Navy's recent round-the-world cruises. No doubt you've intended to write about your experiences some day. In 1872, Navyman W. K. Van Reypen drew duty on board *USS Iroquois*. Before the cruise was completed he saw all these ports and many more. This is how it was some 75 or more years ago.

When 32-year-old Navy Surgeon W. K. Van Reypen reported on board Iroquois *he had behind him more than 10 years' duty in the Naval service and his career was just beginning. A veteran of the Civil War he was to serve the Navy for 40 years to retire as Senior Rear Admiral in 1902.*

USS *Iroquois also had a busy career. Commissioned in 1859, she participated in several engagements during the Civil War, was decommissioned in 1865 only to be recommissioned two years later for duty on the Asiatic Station in time to be present in 1868 at the opening of the ports of Osaka and Hiogo, Japan. It was after* Iroquois *returned from this tour of Far East duty that Van Reypen joined her. In 1899 she was transferred to the Marine Hospital Service.*

Below is an abbreviated version of Van Reypen's account of the voyage of Iroquois *around the world.*

ON THE 3D OF MARCH 1872 I reported for duty on board the steam sloop of war *Iroquois,* lying at the Brooklyn Navy Yard, preparing for a cruise on the Asiatic station.

Iroquois was a wooden steam sloop of war displacing 1575 tons, carrying 6 guns and a crew of 165 men. She was fitted with a two-bladed screw, which could be hoisted through a well hole in the stern, thus offering no resistance when the vessel was under sail. She had been for many months under repair at the Philadelphia Navy Yard, and had recently formed one of the reception fleet on the arrival at New York of the Grand Duke Alexis. Accidents were continually happening to her machinery, and when I joined her she was still undergoing repairs. We sailed on St. Patrick's day.

At the time of our departure, the barometer was falling, the clouds looked threatening and we knew there was no prospective joy in store for us. We steamed clear of the land, uncoupled, hoisted our propeller, set sail, and proceeded to make everything secure for the storm we knew was approaching. As the wind increased we shortened sail and before morning were under close reefed topsails.

THE STORM SOON OVERTOOK US. We knew from the rapidly falling barometer, the direction and force of the wind, that we were in the track of one of those

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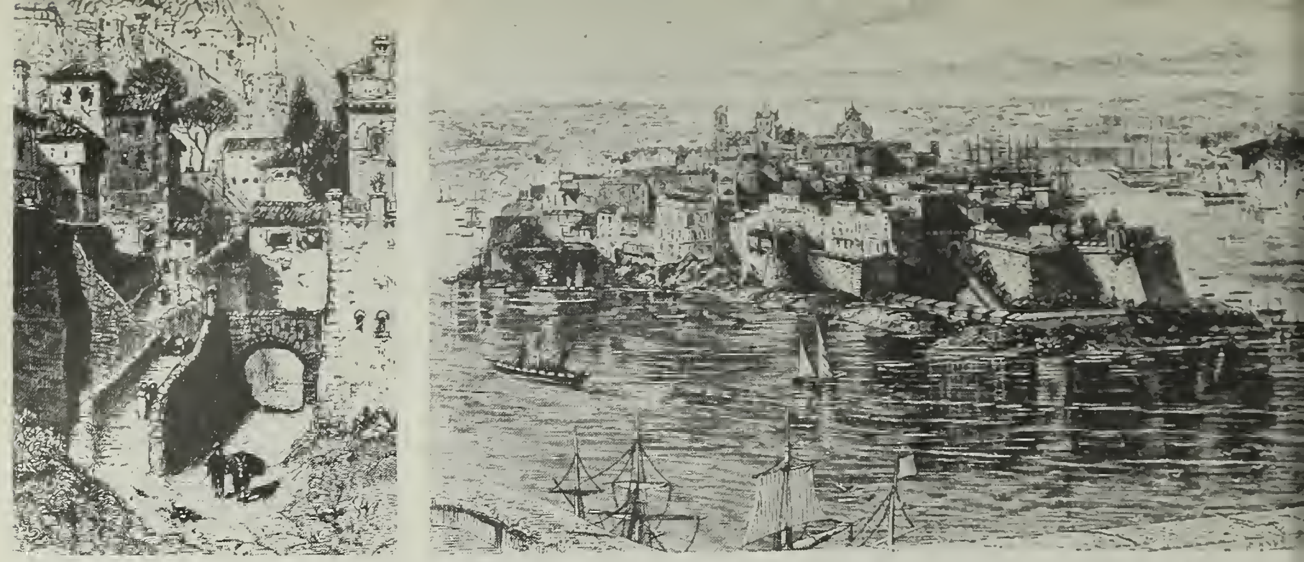
From an address read before the Carleton Club, New York, 1882, made available through the courtesy of the Navy Section, National Archives, Washington, D. C.



GIBRALTAR WAS fortress with town populated by many races. *(Rt.)* Valetta, capital of Malta, overlooking beautiful bay, was liberty port for crew of *Iroquois*. Held by British, Malta was strong Mediterranian fortress.

circular storms which, commencing in the West Indies, sweeps with resistless force along our Atlantic coast, until it expends its energy on the North Western shores of Europe. We anticipated its advent with anything but agreeable thought, for we knew how badly qualified *Iroquois* was to resist it.

On the second night out our troubles commenced. Sheets carried away, the fore topsail was split, the iron work about the yards broke like pot metal, the rudder chains parted, the ship fell off in the trough of the sea, and rolled and jerked as though the masts would snap out of her.

One huge wave, striving to outdo its fellows, struck us with tremendous force just forward of the starboard beam and broke over us. The ship staggered and for a moment was still; nothing could be heard but the rushing of water. Those of us who were below did not know whether we were then on our way to the unknown, or if we had a longer lease.

The ship soon gave a lurch and freed herself from some of the deck-load of water. When she righted and resumed her original occupation of rolling, the whale boat lashed to the davits on the port quarter had disappeared, torn from its fastenings, and gone to join the dots of wreckage on the ocean's bosom. The first cutter, swinging just abaft the beam on the starboard side had been wrenched from the after davit, and thrown in on the quarter deck.

At midnight, when the watch on deck were busily engaged in clearing away the wreck we were startled by the rapid ringing of the firebell, and the cry of "fire in the main hold." This, we thought, was the climax. Officers and men in scant attire rushed to their respective stations.

It proved to be a false alarm. They were distilling water in the fireroom and the supposed smoke, which had been discovered, was the hot water vapor arising from the recently distilled water in the tanks. After this excitement we repaired to our quarters to get what rest we might in our discomfort.

I was lying in my berth, wide awake, and trying to hold on, when I felt another wave strike the ship, apparently near the forecastle. It was as though she had struck a rock, for she seemed to stop, and then writhe and twist. The snapping of cordage and crackling of timbers were succeeded by heavy lee roll, and then the deluge came. Through the seams of every deck plank and between the outside planking, sheets of water ran, flooding the room and saturating its contents. My mattress almost floated in the berth; on the wardroom floor the water was half-knee-deep, and I had to sit under an umbrella.

My messmates were scarcely more fortunate, and a sorry sight we presented for the remainder of the night, crouched and drenched, holding on to stanchions and trying to be jolly. Toward morning the rolling of the ship had closed her seams somewhat, so we were only treated to an intermittent bath.

We were battened down for 14 days, when the gale ceased, and we began again to think that life was worth living.

BUT THERE IS AN END to all troubles. On the 25th day out from New York we came to anchor under the shadow of the rock of Gibraltar. (One must experience to appreciate the sense of relief and complete rest that is enjoyed immediately after a long and disagreeable sea voyage. For a day or two one insensibly continues his swaying motion while walking on the deck, for when the ship is rolling one must never let go his hold with one foot before the other is firmly implanted.)

Gibraltar, as you know, is a rock 1400 feet high, three miles long, and about a mile wide, on the southern coast of Spain, at the nothern side of the entrance to the Mediterranean. It has been in possession of the English for nearly 200 years, and is the outermost of their chain of ports guarding the pathway to their Indian Empire. The northern and eastern sides are precipitous, but toward the west and south there is a gentle slope, and from the beach extending a short distance up this slope a town is built. There are about 15,000 inhabitants: Moors, Algerians, Spaniards, Portuguese, Turks, Arabs, and refugees from Europe, Asia, and Africa. The inhabitants of Gibraltar are known in Europe as "Rock Scorpions."

The strength of the garrison is usually about 5000

NILE WAS LINED with papyrus plants, but familiar bulrushes were absent. *(Rt.)* Sphinx at Ghizeh, near Cairo, stands majestic as it has through the centuries. Surrounding area was sandy without a living thing in sight.

men. Gibraltar is sometimes called the Key of the Mediterranean, and from this expression has arisen the erroneous idea that the guns from the rock command the entrance to the Straits. There are two reasons why this cannot be, one is that the Straits are nine miles wide, and the other that the tunneled chambers in the rock, and he batteries are on the northern and western side. The rock is fortified for defence, and not for attack. Its importance lies in the fact that the bay at its foot would be a safe harbor of refuge for English fleet cruising off the entrance to the Straits.

AFTER WE HAD REPAIRED the boilers and had the ship thoroughly caulked we sailed from Gibraltar for Malta, where we arrived after a pleasant run of six days. Malta is another of Englands' strongholds. It has been a Mediterranean fortress for centuries, and attained its greatest celebrity after the Crusades when held by the Knights of St. John, who reigned here in regal splendor, and have left many architectural monuments of their possession. It was taken from them by the army of Napoleon, and from the French in 1800 by the English, who have since held possession.

The town of Valetta is on the sides and summit of an eminence, overlooking a beauiful bay which forms the harbor. Citadels and forts are everywhere. Each possessor has increased its capabilities for defence, and it is now considered almost as impregnable as Gibraltar.

Five days after leaving Malta we arrived at Port Said, the northern entrance to the Suez Canal. Port Said reminded me very much of a mushroom mining town in California. Everything appeared temporary.

AS IROQUOIS WAS TO remain at Port Said several days to repair boilers before steaming through the canal, a party from the ship obtained leave to go to Cairo. We chartered a steam launch, and about 9 in the evening started for Ismailia, from which place we could take the train for Cairo. Of course the proper thing for us to have done was to have had a good night's rest, but there was too much bottled up hilarity on board, and the early morning found us entering Ismailia with husky voices from our night's concert. After breakfast at Ismailia we took the train for Cairo. The English compartment cars were comfortable, but hot. For miles we traversed a desolate, level, sandy plain, not a spear of grass or living thing in sight, and yet, nothing but water is wanted to make this desert a blooming garden.

Cairo is a delight and a wonder. There is an old and new city adjoining. In ten minutes one can go from the realms of Pharaoh to Paris.

There are many mosques in Cairo. Each ruler has built one to commemorate his reign, but at his death it has been allowed to go to destruction. The rising and not the setting sun, finds worshippers in Egypt, as elsewhere. Only one is kept in perfect repair, which is a fortress as well as a mosque. It was here that the Mamelukes made their last stand against the victorious army of Napoleon, and from the summit of the rock on which it stands they threw themselves to be dashed to pieces at its foot. The gravestones at the foot of the rock are their last memorials.

We stepped into a carriage at our hotel door, and stepped out of it at the base of the pyramids. There are few things in the world that equal the advertisement but the pyramids do. No picture can give an adequate idea of their immensity and imposing grandeurs. The Sphinx which is about a hundred yards distant, is partly covered by sand. It looked grand, gloomy, and peculiar, especially the nose, part of which has been broken off, which makes it look as though it had recently had a little difficulty with another sphinx, and was worsted in the encounter.

The Nile when I saw it, was a muddy sluggish stream. I looked for bulrushes but did not see any. I presume it was out of season.

We stopped at Suez, and took on board a Red Sea pilot named Achmet Ali and steamed slowly down the Red Sea, bound for our next port, Aden. We saw Mount Sinai and, where the children of Israel crossed, we steamed over without touching. It must have deepened since the Exodus.

One scorching day I asked our pilot, Achmet Ali, if he thought we would soon have a change of weather, he replied, "Yes, I think it will not be so cold tomorrow."

Under the continued influence of the intense heat, physical depression became so marked that I had to distribute stimulants liberally. By service regulations distilled spirituous liquors are not allowed on board ship,

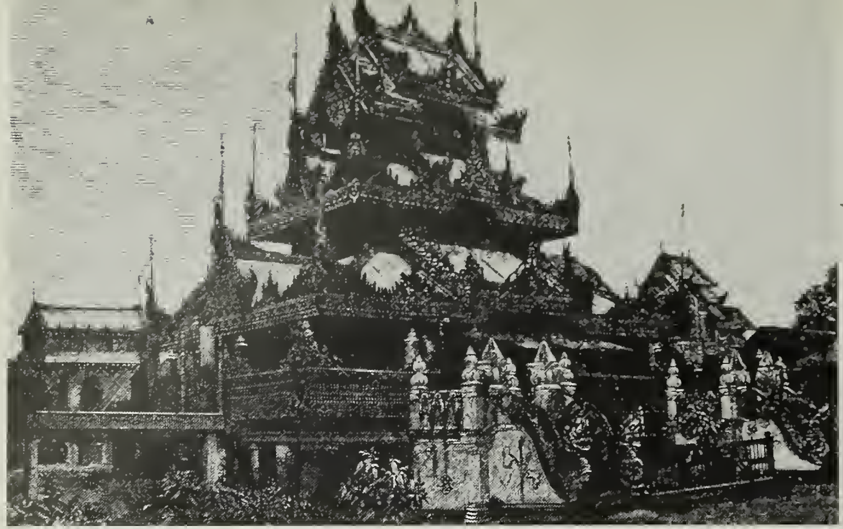


IMAGE-HOUSE was one of many worshiping places for Burmese. Unusual customs of these people gave style of 'temples' elaborate oriental artistry.

JAPANESE tribal outfit usually consisted of loin cloth, and tattooing.

except in the Medical Department, and the surgeon becomes at times a great object of interest.

★ ★ ★

One very dark night, while crossing the Bay of Bengal we beheld a singular phenomenon. Ahead of us on the distant horizon a faint streak of light appeared, it grew broader and broader on the water until the whole ocean seemed incandescent. Soon we entered it, and we seemed to be sailing on a sea of fire, as far as vision could reach, ahead, and on either side, the water was brilliant with those phosphorescent animalcula so often seen in the tropics. Looking over the side one seemed to be looking into the depths of a glowing furnace. In the wake of the ship myriads of little waves were curling, twisting, and chasing one another. Many of us had seen phosphorescence in the tropics, but no one had ever before seen a sight like this.

On the 12th day out we passed close to the Island of Ceylon, and we were all on deck, to test the reality of the missionary hymn, "What Though the Spicy Breezes Blow Soft O'er Ceylon's Isle." We sniffed and sniffed, but the only odor we could get was from salt pork being cooked at the galley.

We arrived at Singapore on the 5th day of July and we felt that we had entered paradise. Singapore presents a beautiful appearance from the harbor, tropical verdure exists here in profusion. Many of the buildings are large and imposing, and they are almost hidden among the trees which abound in the city.

At Singapore we found orders directing us to proceed to Bangkok in Siam.

One day when we were lying almost becalmed in the Gulf of Siam, we saw a number of white porpoises, and near them were quantities of little objects moving rapidly along the surface of the water. They proved to be the heads of water snakes, which had evidently come out for an airing.

In a few days we came to anchor off the mouth of the Menom River, which was too shallow to allow us to enter. One of our boats was dispatched to Bangkok to inform the consul of our arrival. The next morning, a handsome steam yacht, owned by the King, came down the river and alongside the ship. A Siamese official came on board, and presented the compliments of the King, placing his yacht at our disposal for our conveyance.

The river is narrow and sluggish, and the land on either side is swampy. We soon came in sight of Bangkok, a compact mass of bamboo houses, many of them with tiled roofs, stretching for more than a mile along the right bank of the river. There were innumerable boats, and all along the shore of the opposite bank were houses on rafts, secured by long poles driven into the mud. These houses seemed to be always on the move.

The day after our arrival, sweltering in full dress uniforms, we went to pay our respects to the King. We were received in the antechamber by the minister of foreign affairs who conducted us to the audience chamber where the King received us. We adjourned to the dining room, where we were seated around a table laden with fruits and wine, and invited to partake. We wondered that no servants were visible. Presently the King asked if some one would have tea, and upon being answered in the affirmative, he uttered some expression in a loud tone, presently I felt something at my feet, and a hand, holding a cup of tea was passed up from under the table.

The servants came and went to and fro in the room on their elbows and knees. When not engaged in any duty they kept their foreheads on the floor, sometimes they would turn slightly, and cast furtive glances to see if their royal master showed any signs of wanting them. They never arose to their feet except in cases of emergency, and then by his express order.

From Bangkok we sailed to Hong Kong. Hong Kong is on a mountainous island at the mouth of the river leading to Canton, a few hours distant by steamer from Hong Kong. Its immensity immediately impresses one. Dotted here and there about the city one sees four- or five-story houses, these are the pawnbroker shops. Almost all the other buildings are of one story. The streets are very narrow and are filled with people. One might as well try to count the bees in a hive.

Along the river banks are moored beautiful decorated junks filled with flowers, and resplendent with banners. These are the famous flower-boats, the restaurants of Canton.

At Shanghai, the northeast monsoon was blowing, and we had great difficulty in steaming against it up the

JAPANESE TEMPLE architecture impressed visiting American navymen.

WHEN THE CREW of *Iroquois* arrived in Nagasaki, they were well received. Interesting to the sailors were such means of oriental travel as shown above.

Formosa Channel. We sent down our light yards and top gallantmasts, and even then had to tack under steam. Finally we arrived at Shanghai, and anchored abreast of the city. Here we soon found ourselves at home. Several of us had letters of introduction to residents, and during our stay we were entertained with a lavish hospitality, unknown out of China.

OUR FIRST PORT in Japan was Nagasaki. The town is romantically situated at the head of a small bay, making in from seaward. High hills surround the bay and at the foot, and up the sides of these hills are built the picturesque houses, almost hidden by the trees and flowering vines. Some of the more pretentious dwellings are of stone, but the majority are of bamboo, with partitions of light pine smoothed and fitted by the perfection of joiner-work. Instead of glass the windows are of exceedingly thin and strong paper, oiled.

The interior of a Japanese dwelling is a study. There is generally but one floor, divided into compartments. The floor is covered by matting. There are neither chairs, tables, nor bedsteads, everyone squats upon the floor. At their meals they surround a small portable furnace, on which is a pot, containing their cooking rice and meat. Each one is provided with a bowl and they replenish it as required from the pot. At night they lie on heavy quilts spread on the floor, and for a pillow they use a block of wood, somewhat larger than a brick, upon which they rest, not their head, but their neck. A Japanese maiden has her hair so elaborately arranged that she cannot rest it on a pillow. The floor is scrupulously clean, and natives always remove their wooden sandals before entering the house.

Many of the men wear only a loin cloth and tattooing. Others wear a sort of dressing-gown. The women wear a succession of gowns, often of bright colors and forming beautiful contrasts. They use quantities of rouge on their lips, and rice-powder on their faces. Many of them black their teeth and their eyebrows. They are almost all plump and fresh-looking, and many of them are exceedingly handsome. They are always in a good humor, laughing, chatting, and gossiping. They are fond of music and dancing.

From Nagasaki we entered the Inland Sea of Japan. We anchored every night, and were three days steaming to Kobe.

WHILE THE SHIP was at Kobe a party of us visited Osaka, and made a journey into the interior as far as Kioto, the holy city of Japan. We travelled partly by boat, which was propelled by poling or tracking, and partly by jinricksha. The jinricksha is an enlarged, two-wheeled baby carriage. It is pulled by a man, who can keep up a dog trot for the whole day without seeming fatigued.

At Kioto we attended the annual Japanese fair then in progress, and visited some of the temples with which the city abounds. It was the home of the Tycoon, the spiritual head of the empire, before he was disestablished. In one of the temples there were a thousand and one idols, life-size wooden images, beautifully gilded and ornamented, and arranged in long rows and tiers on one side of an immense building.

Soon after our return to Kobe we sailed for Yokohama. This is the seaport of Tokyo, from which it is a few miles distant. The native town, and the foreign business houses are on a level plateau, back of which rises a bluff, on which, overlooking the harbor, are the houses of the foreign residents.

Here I experienced my first earthquake. I had spent the night on shore, and as I was about to arise in the morning I heard a violent slamming of doors, a breaking of glass and crockery, and the building, including my bed, was noticeably swaying. I attempted to get out of bed but everything appeared to be unsteady. When I endeavored to put my foot on the floor I could hardly find a place for it, and a momentary feeling of faintness came over me. These sensations in the morning are not always ascribed to earthquakes.

We spent many days in visiting the curio shops of Yokohama, and the temples and palaces of Tokyo, as well as making trips to Fujiyama, the sacred mountain of Japan, and visiting places of interest in the interior.

From Yokohama we returned to Shanghai, where we received orders to visit Calcutta, Madras, and Bombay. We proceeded on our way as far as Hong Kong, where our boilers broke down, utterly beyond repair. After remaining several months at Hong Kong, *Iroquois* came under sail to San Francisco.

From San Francisco I came by rail to New York, and after an absence of two years and three months completed my journey around the world.

TAFFRAIL TALK

THIS MONTH WE HAVE a couple of meaty items in the food-for-thought department.

The first concerns USS *Shangri La* (CVA 38) and how she keeps her crew members happy by feeding them hamburger. Here's how it's done.

When the ship's commissary department orders beef from a Naval Supply Depot, the depot breaks the order down into certain percentages of ground beef, roasts, steaks, stew beef and other cuts. This usually leaves the commissarymen with enough hamburger for three meals for every one meal of roast. At that rate, hamburger can easily become grounds for a beef.

However, some inspired soul figured out a way to keep hamburger from appearing on the menu too often, in spite of the three-to-one odds. "Just serve hamburgers after the movies twice a week," he reasoned, "and we can make a real dent in our supply. It won't interfere with our allowed ration costs, either, because there are so many brown-baggers and liberty hounds on board who skip the evening meal."

Now, thanks to this unknown genius, *Shangri La's* movie-goers get a tasty bedtime snack two nights a week and the whole crew gets more desirable cuts of meat at lunchtime.

★ ★ ★

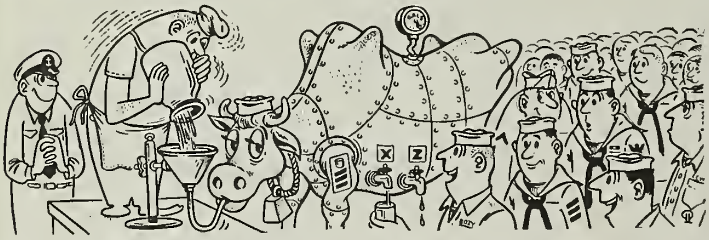
Our second meaty item takes us to the General Mess at the Naval Station, San Diego, Calif., where ENS J. M. Zepzyk, SC, USN, has introduced a celebration called "I Rate a Steak Day."

Honored on this occasion was a big batch of enlisted men who had just been advanced in rate. Naturally, the highlight of the day was a banquet of T-bone steak, complete with all the trimmings.

Sounds like a pretty good idea to us.

★ ★ ★

At the risk of boring our readers, for some time we have been pointing with alarm at the mechanization of more of our favorite mores. It is with mixed feelings that we cite two more illustrations of this trend. We don't know why, but USS *Saratoga* (CVA 60) boasts that it is the first ship in the Navy to receive a new type milk-making device. These mechanical cows, says *Sara*, are capable of producing 36 gallons of fresh "drinkable" milk with a feeding of only 12 gallons of frozen or chilled fresh milk concentrates. That's real nice, but we feel that the men of *Sara* haven't lived until they see this cow put its foot into the milk bucket.



The All Hands Staff

The United States Navy

Guardian of our Country

The United States Navy is responsible for maintaining control of the sea and is a ready force on watch at home and overseas, capable of strong action to preserve the peace or of instant offensive action to win in war.

It is upon the maintenance of this control that our country's glorious future depends. The United States Navy exists to make it so.

We Serve with Honor

Tradition, valor and victory are the Navy's heritage from the past. To these may be added dedication, discipline and vigilance as the watchwords of the present and future. At home or on distant stations, we serve with pride, confident in the respect of our country, our shipmates, and our families. Our responsibilities sober us; our adversities strengthen us.

Service to God and Country is our special privilege. We serve with honor.

The Future of the Navy

The Navy will always employ new weapons, new techniques and greater power to protect and defend the United States on the sea, under the sea, and in the air.

Now and in the future, control of the sea gives the United States her greatest advantage for the maintenance of peace and for victory in war. Mobility, surprise, dispersal and offensive power are the keynotes of the new Navy. The roots of the Navy lie in a strong belief in the future, in continued dedication to our tasks, and in reflection on our heritage from the past. Never have our opportunities and our responsibilities been greater.

ALL HANDS the Bureau of Naval Personnel Information Bulletin, with approval of the Bureau of the Budget on 23 June 1955, is published monthly by the Bureau of Naval Personnel for the information and interest of the naval service as a whole. Opinions expressed are not necessarily those of the Navy Department. Reference to regulations, orders and directions is for information and does not by publication herein constitute authority for action. All original material may be reprinted as desired if proper credit is given ALL HANDS. Original articles of general interest may be forwarded to the Editor.

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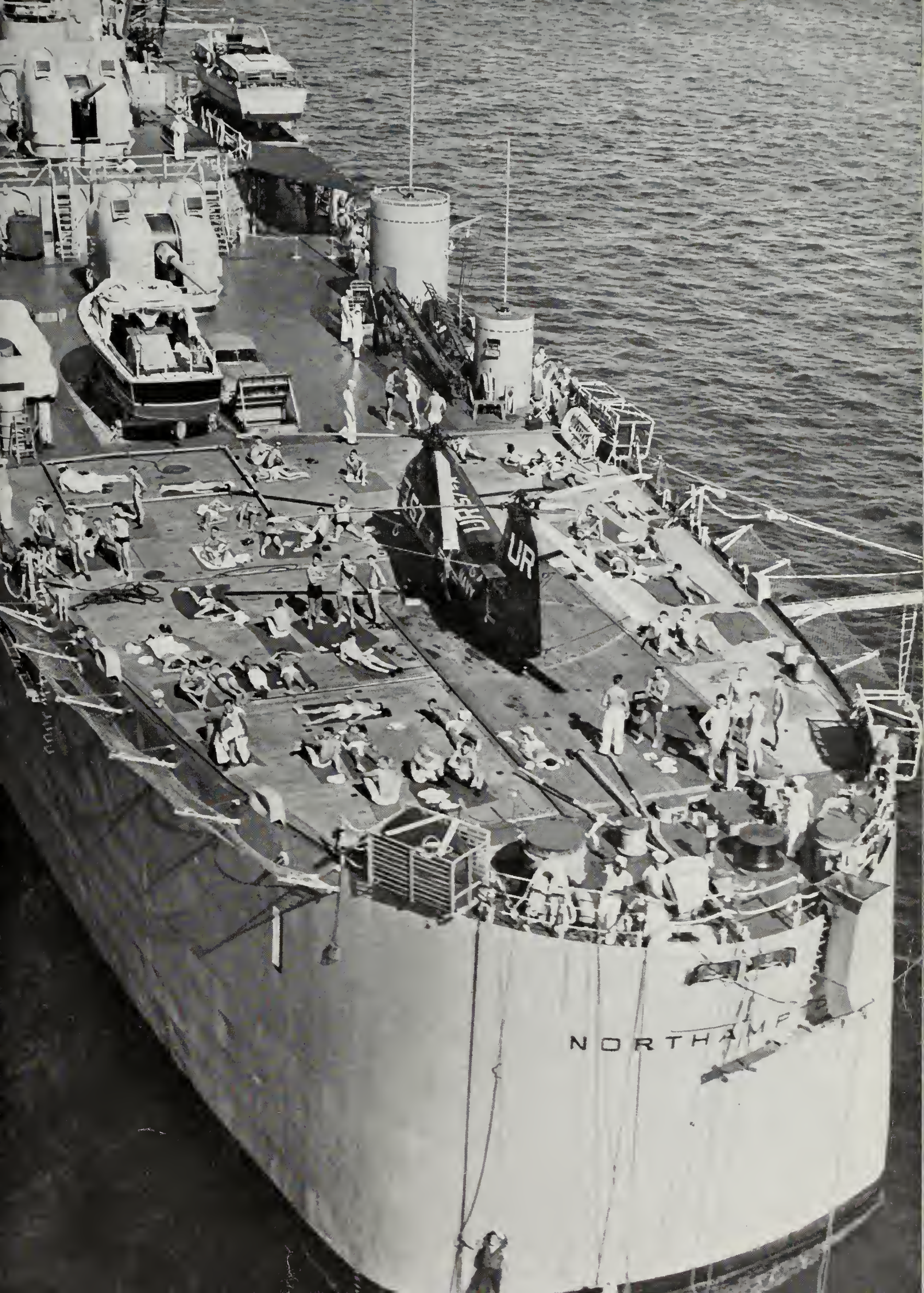
• AT RIGHT: DECKED OUT—During a lull in Fleet training operations crewmembers on board *USS Northampton* (CLC 1) stretch out on the fantail to get some sunshine while at anchorage off Sardinia.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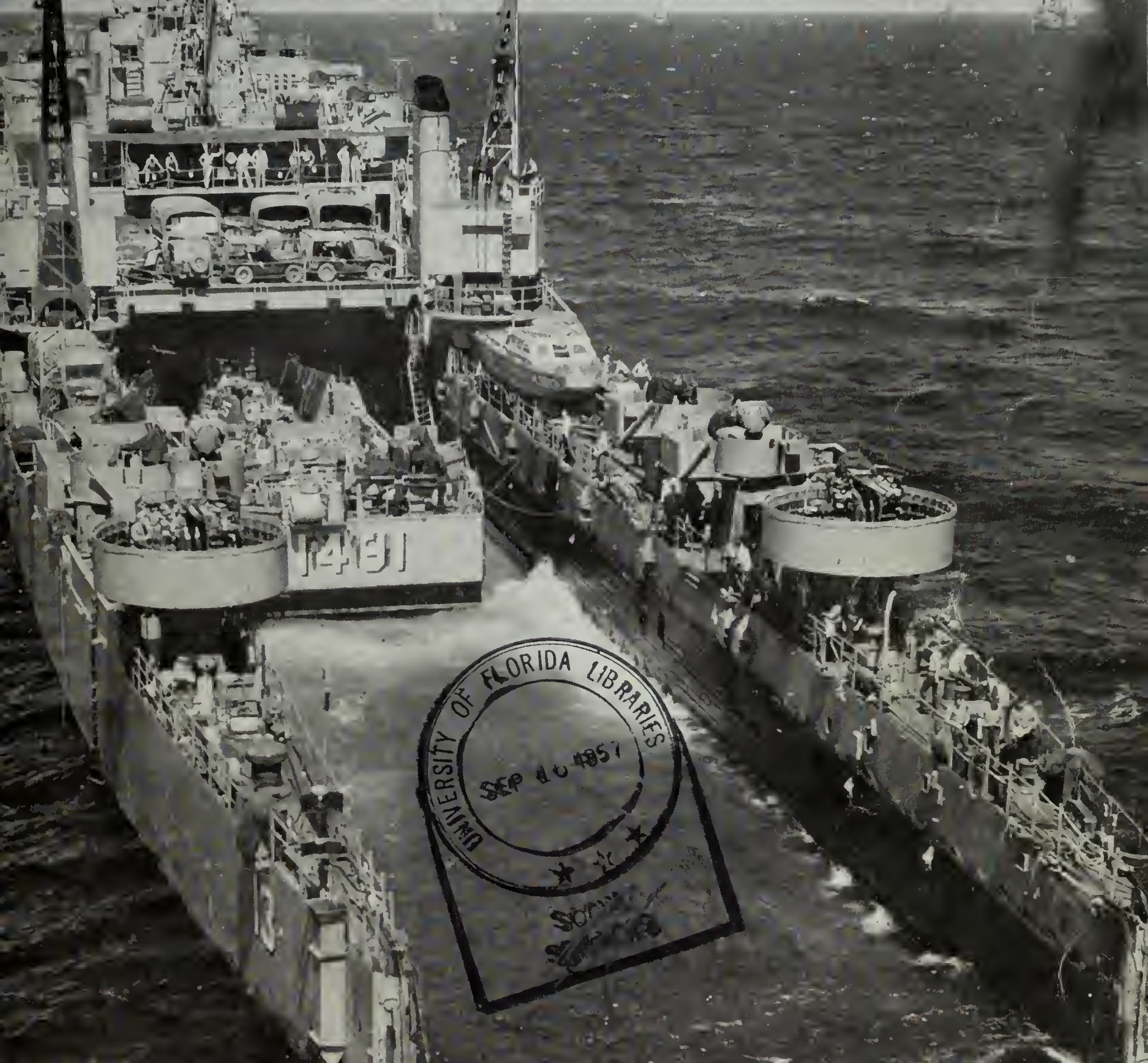
NORTHAMP

sea sights

the world
at your gangway

ALL HANDS

THE BUREAU OF NAVAL PERSONNEL INFORMATION BULLETIN



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SEPTEMBER 1957

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THE BUREAU OF NAVAL PERSONNEL INFORMATION BULLETIN

SEPTEMBER 1957 Nav-Pers-O NUMBER 488

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AT LEFT: SOLID FORMATION—Well trained boots at U. S. Naval Training Center, San Diego, Calif., form geometrical patterns on the center's parade ground as they present the colors under the evening sun.

• FRONT COVER: INSIDE JOB—Landing Ship Dock USS Casa Grande (LSD 13) drops her stern gate to discharge landing craft while participating in amphibious landing exercises in Caribbean waters.

• CREDITS: All photographs published in ALL HANDS are official Department of Defense photos unless otherwise designated.

SPIRIT AT GREAT LAKES is the same although appearance has changed. *Above and below:* recruits of WW I.

NTC Great Lakes—

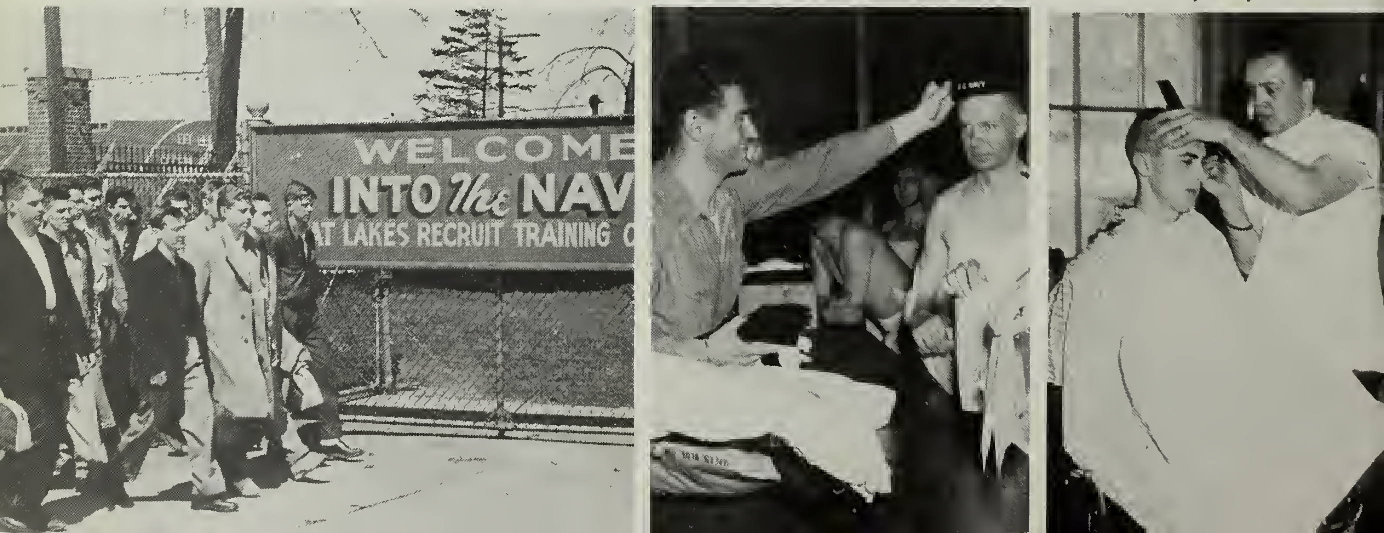
WHERE

WHEN PRESIDENT THEODORE ROOSEVELT first pushed the idea of a naval station in the Midwest people were just as skeptical of this idea as they were of the flying machine the Wright Brothers were experimenting with at about the same time.

Who ever heard of a naval base 1200 miles from the nearest ocean? What type of sailor could possibly be trained there? These were the questions people asked, but the U.S. Naval Training Center, Great Lakes, Ill., was finally commissioned several years later, in 1911.

Now the answers are evident. In 46 years Great Lakes has grown to be the largest naval recruit training center in the world and the biggest naval installation in the Midwest. During World War II one third of

GREAT LAKES RECRUITS are not bewildered long. They get a fast and thorough indoctrination in Navy way of life.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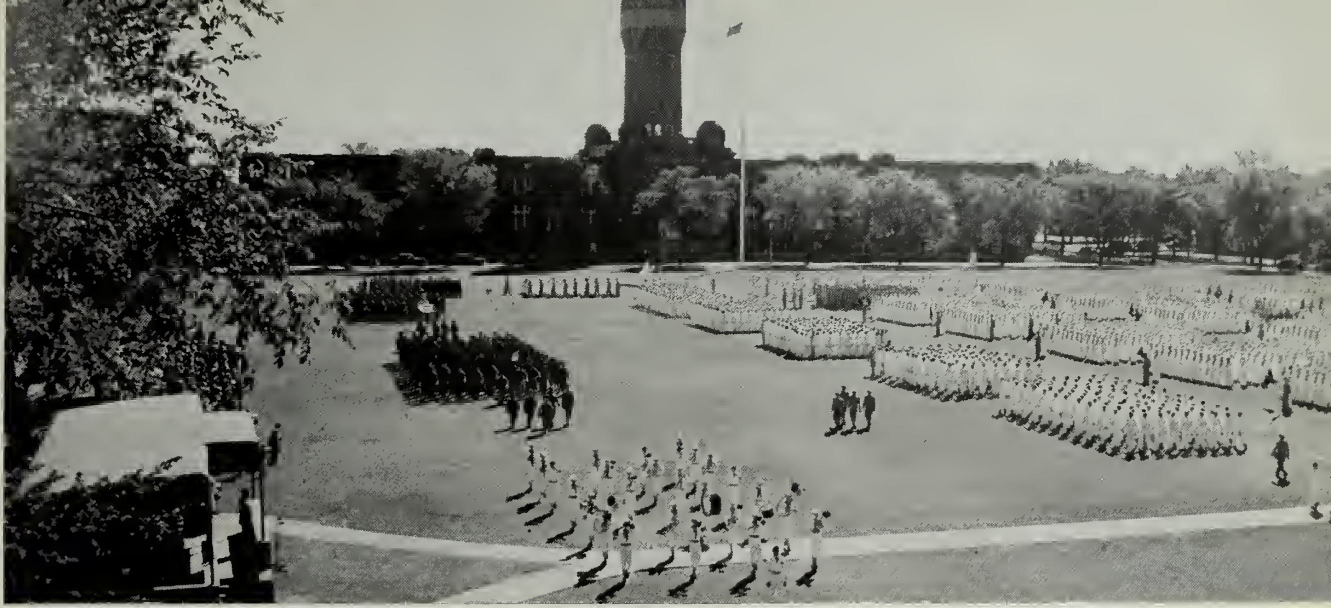


PASSING IN REVIEW — Men demonstrate teamwork and coordination which are carried through their naval careers.

SAILORS ARE MADE

America's fighting Navymen were trained "out in the Midwestern boondocks." Since 1911 approximately one and one-half million men and women have learned their Navy ABCs at Great Lakes. A sailor who has the Great Lakes stamp of approval has the Lakes' reputation behind him.

Today, if the unknown first Great Lakes recruit, who reported on board in July 1911, were to visit his old Alma Mater, he wouldn't recognize it—nor would most of those who followed him. Great Lakes as it stands now has accommodations for 9,000 boots in addition to about 10,000 other people who are assigned to such activities as the Ninth Naval District headquarters, the 16-school training command and one of the largest naval hospitals in the Midwest.

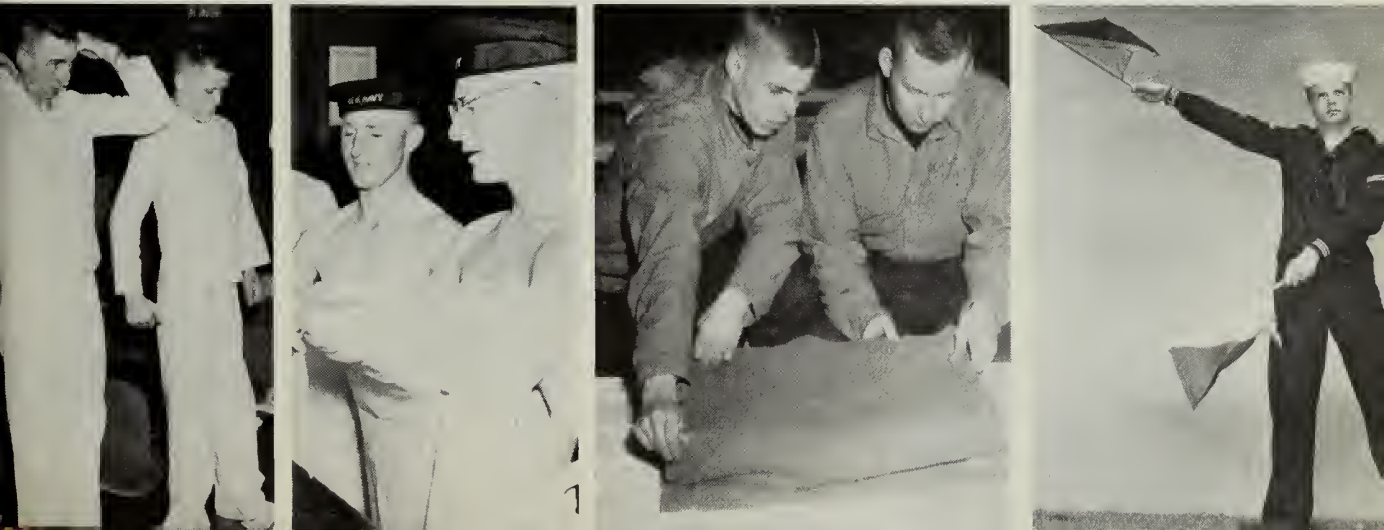
During World War II the seams almost came apart as more than 100,000 enlisted men were on board at one time. The training center handled more recruits than any other boot camp. And, before the war was over, 675 new buildings had to be put up to keep pace with the Navy's demands for men.

These buildings were added to the 1736 constructed during World War I, when 25,000 men were trained at the Lakes. During these two sieges of growing pains it was not at all uncommon for a bedraggled recruit to retire to a tent instead of a barracks or to a hammock rather than a pad. The boot camp was a 12-week course—and every minute of it business. Men were being conditioned for war and all evidence points toward success in this respect.

Today, there is no need for mass production output, even though it may seem helter-skelter to the men who experience the training. Every man lives in a barracks and maintains his own locker. There's time for recreation and fun along with the building of esprit de corps and the ship-life indoctrination. Each man's talents and aptitudes are weighed carefully so that he will be appropriately assigned on his first tour of duty in a ship or station.

Great Lakes is situated near Lake Michigan. It's not nearly so large as the Atlantic or Pacific but would look just as big to young lads straight

NAVY KNOW-HOW becomes a part of each recruit's life. Soon he becomes a sharp-looking, well trained whitehat.



RECRUITS fight fire with high-velocity fog. *Below:* Trainee zeros in on target.

from Midwestern farms. Their curiosity for the sea and travel makes them good sailors—but adjustments must first be made.

On first sight of the huge drill halls the young recruit might think "This sure would hold a lot of hay"; or the sight of 125 acres of drill fields—all untilled—might amuse him. But after the training period the new sailors have tempered their memories of civilian life with eagerness to begin their naval careers.

The oldtimers who could have joined the Navy when they were only 14 years old (a permissible practice right after the turn of the century) will perhaps find the new Great Lakes inconceivable. Even those who went through boot camp there during World War II would soon lose their way around, or at least find things very unfamiliar.

The wooden barracks and buildings used for the training of thousands of Navymen in the 1940s will soon be replaced. A long-range construction and modernization program is in the making to replace existing substandard facilities.

When the first new recruit camp is completed this summer, the most modern training facilities will be at Great Lakes. The camp will include barracks, mess hall and classrooms which will quarter, feed and train more than 5000 recruits. A modern three-story barracks, which will house 2000 service school students, is also being completed. All the new barracks will be of permanent construction.

Looking at the size of Great Lakes from a different angle, if you can imagine a building 25 feet wide, 13 feet tall and 100 miles long, you get some idea of total area of all the Great Lakes' buildings if they were put under one roof.

Four of these buildings are the original drill halls in which recruits have paraded, played and drilled for the past 47 years. Plans are now being made for their renovation. In addition, the Navy plans to develop 590 units of dependents housing, some of which will replace the present public quarters.

Great Lakes needs plenty of buildings because there's so much going on there.

Under the service school command, a Navyman can learn anything from watch and tooth repair to atomic theory. Seven of the 12 basic vocational categories within the Navy's rating structure are covered at the Lakes—electronics, pre-

BLUEJACKETS learn to handle small boats in recruit training. *Right:* Mars-style Navymen wait to enter gas chamber.

cision equipment, administrative and clerical, engineering and hull and medical and dental.

A total of 37 different classes are offered in the four types of schools—P (preparatory), A (basic skills of a specialty), B (advanced skills) and C (short courses).

There are four electronics schools, two of them for electronics technicians. The others are the basic electricity and electronics school and the electronics maintenance school.

The instrumentman (IM) and opticalman (OM) schools at the Lakes represent the precision equipment group. A few of the courses taught in the IM school are calculator, adding machine and watch repair. The OM courses include submarine periscopes, lead computing, sight, range finder and advanced telescope repairing.

Other specialists who receive training at Great Lakes are machinist's mates, gunner's mates, enginemen, electrician's mates, boilermen, hospital corpsmen and dental technicians. The Navy's only journalist school is also located there.

Officials at Great Lakes believe that to produce the best sailors in the world, the most competent instructors must first be trained. To accomplish this, a four-week course at the Lakes provides training in methods and techniques for instructors in the service school and recruit training commands.

One of the main reasons for the tremendous growth of Great Lakes is its centralized location. It is, in many respects, a giant central terminal for the entire Navy—a handy point of departure to the Fleet located in all corners of the globe.

WHITEHATS learn ropes in boot training. *Below:* Recruits show trophy flags.

For instance, two of the most important Navy functions—supply and promotion examinations—are governed from Great Lakes which is also the headquarters of the largest district in the Navy. There are two major supply depots located at the Lakes. One controls the procurement and distribution of repair parts required for the maintenance of electronic equipment for all ships and stations; the other handles naval equipment in general.

As soon as a man begins trying for his rating, he will have dealings with the Naval Examining Center at the Lakes, which prepares and processes every exam. An enlisted man doesn't have to worry about not getting an up-to-date and fair examination, because a chief petty officer who's a selected specialist in his rating makes up his test. Recently the

PHYSICAL DRILL with firearms requires teamwork. *Right:* Flemishing down the line prevents it from fouling.

Center has also begun providing and administering officer professional examinations for promotions.

Once a Navyman is promoted or receives a decoration or award, the home folks are sure to know about it.

The Fleet Home Town News Center at Great Lakes—the receiving station for all Fleet news—works 'round the clock near the Lake Michigan shore. Journalists collect and route the news stories and pictures of Navymen and women all over the world to the proper home town publications.

The U.S. Naval Hospital has a staff of 148 officers, 267 enlisted men and Waves and 306 civilians to administer medical, surgical and dental care to naval personnel and their dependents in the Great Lakes area. The hospital is also a huge training center, where corpsmen, residents, interns and nurses are put through their paces.

A new 12-story hospital, which will be the tallest building at Great Lakes, is included in the Lakes building program. The structure will have a floor space of 460,000 square feet to hold 800 beds. The present hospital has been in operation, except for one year, since the installation was commissioned.

There has been no Wave boot camp at the Lakes since 1952 in which year the women's training center was moved to Bainbridge, Md. However, about 225 enlisted Waves are assigned to Center commands.

Great Lakes Naval Station did not come about by mere chance. A few far-sighted citizens made it possible.

EARLY ARMORY at NTC is shown here as recruits with colors in hand stand guard on old wooden steps.

It all began in 1904, when Theodore Roosevelt ordered a group of naval officers to recommend a possible site for a naval installation in the Midwest. This was part of his plan to build up the U.S. Fleet, then just a fraction of what it is today. After inspecting some 37 different locations the officers finally chose Lake Bluff, a short distance from Chicago. The size of the site was 172 acres, and the price $175,000. In view of the "large" sum needed to take over this location, the government hesitated. But a Navy-minded group of citizens—called the Merchants Club of Chicago—raised enough money to buy the ground. They sold it to the United States for one dollar "and other good and valuable consideration."

As did the airplane, the naval base 1200 miles from salt water had to outlive criticism and skepticism. As is usually the case many years after a wise decision or ingenious invention, all this is forgotten—but the subject of the skepticism lives on.

To celebrate the progress, Great Lakes has made a summer-long homecoming for naval personnel—young, old and new—who have gone through recruit training there.

The festivities began 27 May and are scheduled to continue through 7 October.

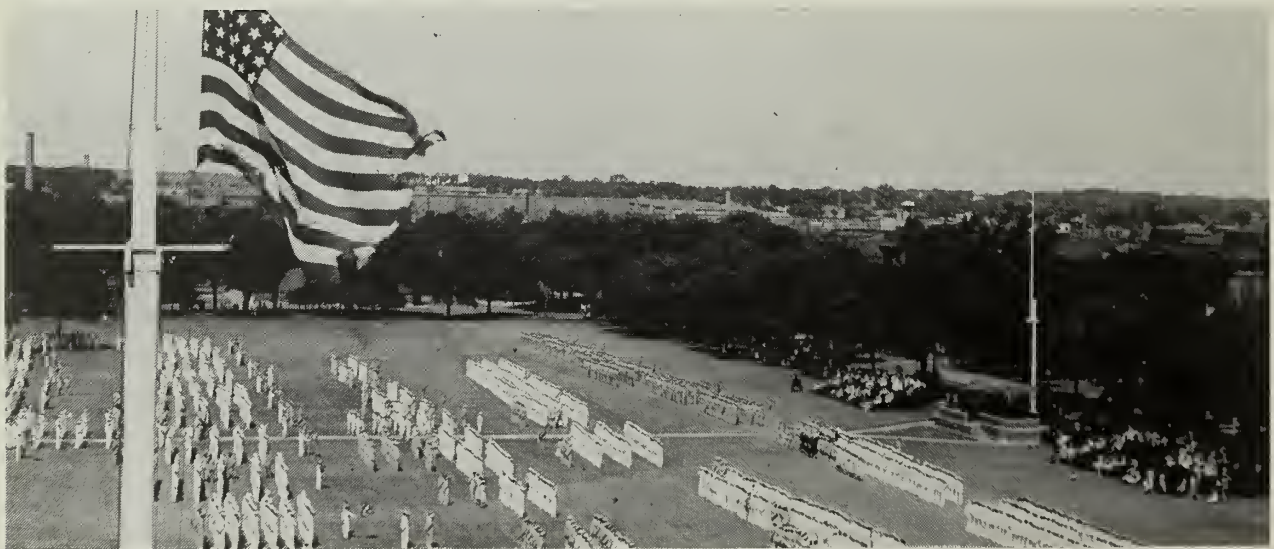
During that time, exhibits showing the development of naval warfare and techniques in the past half-century are to be featured.

Each week one of the 20 Midwestern and Southern states which supply manpower to the training center is to be honored when a special company, recruited especially for the occasion, is graduated en masse and passes in review before the governor from its state.

Guided tours of the installation are being held weekly. Alumni and guests will see skilled Navy technicians demonstrate the role of the modern sailor in shipboard firefighting, deep sea diving and underwater demolition.

Also available to the thousands of guests expected during the celebration will be demonstrations by the Blue Angels—famed jet flight exhibition team—helicopters and amphibious craft. Several recent nuclear weapons and missiles, including the *Sparrow*, *Sidewinder* and the *Regulus II*, are on display during the homecoming.

—William Miller, SN, USNR.



RECRUIT GRADUATION is impressive ceremony at Great Lakes. Graduates then head for all points of the globe.

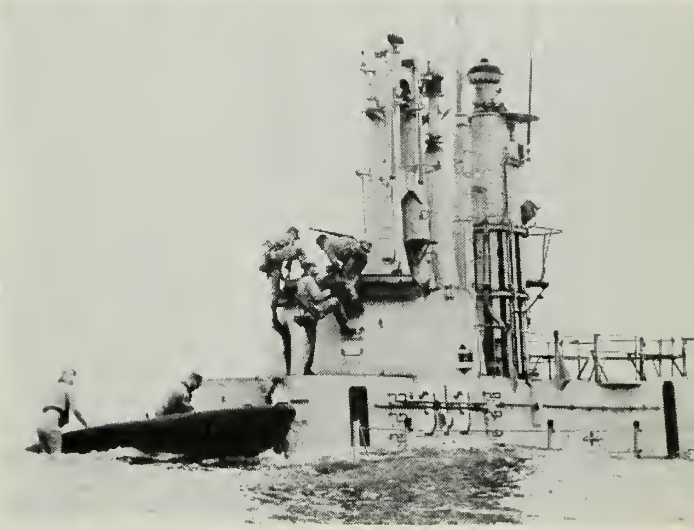
Scouting Mission

SILENT INSPECTIONS by way of Davy Jones' kingdom are part of the primary duties of the Navys' Underwater Demolition Teams.

Not long ago, a UDT and Amphibious Reconnaissance Marines on board USS *Perch* (ASSP 313) took part in Operation Ski Jump off the coast of California. *Perch* put over two reconnaissance parties to infiltrate "enemy" positions, observe strategic points and defense concentration, determine beach conditions for landing men and make a concealed withdrawal from the landing sight.

After a successful mission the men returned to rendezvous with the sub and were quietly taken on board to complete a "job well done."

Top left: Amphibious Marines apply camouflage before Ski Jump scouting mission. *Top right:* Launching party prepares landing boat to carry men ashore. *Right:* Returning to sub, team makes a watery landing. One or two feet of water on deck allows quick and safe recovery of men. *Bottom:* One reconnaissance team leaves *Perch* behind as "Sea Raiders" and frogmen paddle toward "enemy."



THE WORD

Frank, Authentic Advance Information On Policy—Straight from Headquarters

• **MANPOWER REDUCTION** — The Navy, under a Defense Department order for the armed forces to reduce the number of men on active duty, has worked out plans that will make the cuts as painless as possible. The order calls for a Navy reduction of 1635 officers and 13,365 enlisted men by 31 Dec 1957. Here's how it will be carried out:

Officers — Reserve officers, serving on first tours of obligated active duty, who are scheduled for release in December 1957 and January, February and March, 1958, will be released up to three months early, begininng 1 Nov 1957. However, this does not affect other current instructions concerning augmentation and extension for young officers in their initial periods of obligated active duty. Outstanding young Reserve LTs and LTJGs may request one-year extensions or extensions through current deployment if so recommended by their COs.

Some temporary officers in the grades of CDR, LCDR and LT who were in the promotion zone for LCDR during fiscal year 1957 will feel the effects of the reduction. After priority of retention lists are established through board action, several hundred temporary officers in this category will be reverted to their permanent status or retired. In every possible case they will receive at least four months' advance notice of such action.

All Reserve warrant officers will be released to inactive duty.

Reserve officers who have been twice passed over for selection will be released from active duty with four months' notice, instead of at the end of the fiscal year. Temporary officers in the same category will be reverted or retired with four months' notice.

Officer procurement will be reduced in all categories.

Enlisted Personnel — Enlisted men who entered the Navy through Selective Service after 1 Jan 1956 will be separated five months early, beginning 1 Oct 1957. Where these men are in deployed units, retention until the units return to the continental United States is authorized. However, all of these releases should be made before 31 Dec 1957.

Men lacking in professional competence and adaptability will be separated early in accordance with the provisions of NavAct 9 and BuPers Inst. 1910.11B.

Reenlistment standards will be reemphasized.

USN recruit quotas will be cut and enlistment qualifications will be higher.

The number of Reserve volunteers accepted for active duty will be smaller.

These plans were outlined in NavAct 10. Further details are contained in subsequent NavActs and BuPers Instructions.

• **BMs and DCs NEEDED ASHORE** —A number of shore duty billets for BMs and DCs in pay grade E-4 and above who are qualified sail makers, sailboat riggers and wooden hull carpenters are available at the Naval Small Craft Facility at Annapolis, Md.

Boatswain's mates qualified in fabrication, repair and storage of sails, as well as those qualified in the installation, testing and maintenance of standing and running sailboat rigging; and damage controlmen experienced in repair, finishing and preservation of wooden sailing hulls are needed to maintain sailing craft used in training.

If you are now eligible for shore duty in accordance with BuPers Inst. 1306.20C, you should submit a SDEL card (NavPers 2416), or if currently on the shore duty list, submit a corrected card and list these special qualifications.

If you can qualify for shore duty under BuPers Inst. 1306.62, these special qualifications should be listed under Block 16 of the Seavey Rotation Data Card, using short descriptive remarks such as "sail maker," "sailboat rigger" or "wooden hull maintenance."

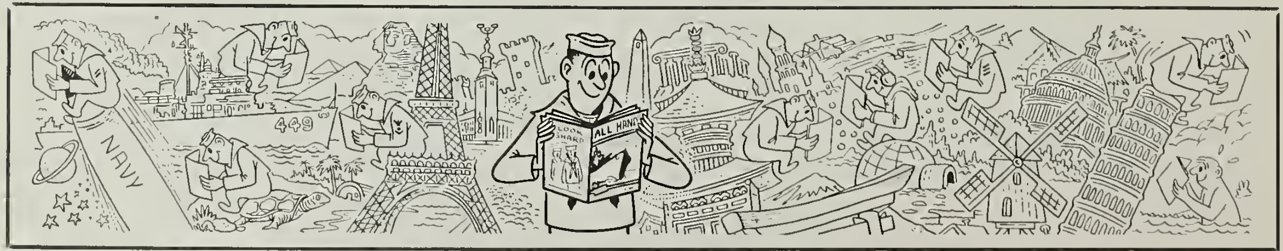
COs have been requested to endorse all requests submitted.

• **DD FORM 93-1**—While most Navymen will agree that paperwork, at times, can become one of the most troublesome burdens ever invented, there is yet one more form which should be filled out—and one of the most important papers to you and your family.

It goes under the title of DD Form 93-1 (Rev-1 Dec 1956) which is your official Record of Emergency Data. Importance of the form is pointed up by the fact that it is not only used for purposes of notifying your next of kin should you become a casualty, but it is the *only* paper in your records which provides for the designation of a beneficiary for the death gratuity and unpaid pay and allowances.

The new revised form was made necessary by the repeal of the Servicemen's Indemnity Act of 1951 and the passage of Public Law 881 by the 84th Congress. The change became effective 1 Jan 1957, canceling the payment of the Servicemen's Indemnity when a death occurred on or after that date.

On the new form you may list



REMEMBER, wherever you are in the world there are nine other Navymen to read this issue—PASS THIS COPY ALONG.

any National Service Life Insurance, U.S. Government Life Insurance or commercial insurance you have in effect, so that in the event of your death, the official Certification of Casualty, NavPers 2059, can be furnished as proof of death to the Veterans Administration and all the commercial insurance companies you have listed.

In the event you become missing, your pay and allowances could amount to thousands of dollars during that time. Your designation of a person to receive all or part of this money is used as a guide in the registration of an allotment for the support of your dependents. You will have helped your family to get over the hurdle of unnecessary problems by taking a few minutes to fill out the form and by making sure that it is kept up-to-date.

Who should make out the new DD Form 93-1? Every man and woman in the Navy who hasn't already done so—and since the revised form was first distributed after 1 Jan 1957, that applies to *you*.

The old form becomes obsolete upon receipt of the new Record of Emergency Data form, and it is up to each officer and enlisted man to see to it that the new one is filled out completely and accurately. If your ship or station runs out of DD Form 93-1 (Rev. 1 Dec 1956), additional supplies are available from Forms and Publications Supply Distribution Points.

• **FREE TRANSPORTATION AT ISOLATED BASES**—As pointed out on page 25 of the May 1957 issue of ALL HANDS—"Rights and Benefits of Navymen and their Dependents"—Navymen (and their families) are authorized to receive one round trip by air to a nearby large city or country during a normal tour of duty at certain isolated bases. The article also stated that, "All transportation will be strictly on a space available basis."

Unfortunately, space for these trips is not always available. At some remote stations the waiting lists are long and aircraft are tied up in operations vital to national defense.

In view of this situation, there can be no guarantee that all individuals who are authorized to take these trips will be able to do so.

The Navy does its best to see that you get a chance to exercise this privilege, but obviously when space is not available, neither are the trips.

• **FURLOUGH FARES** — You may continue to buy furlough rate railroad tickets as you have in the past, but at a slightly higher price.

Tickets at the reduced rate will be granted on round-trip coach accommodations to all naval and military personnel on active duty (including cadets and midshipmen) *traveling in uniform*, while on written authority for leave, pass, or furlough, including liberty cards but not identification cards. Tickets will be valid over the same route in both directions, for 90 days from date of sale and will include regular stopover and baggage privileges.

Authority may be found in BuPers Inst. 4642.2B.

• **WASHINGTON LICENSES** — All Washington State driver's licenses bearing the stamp "Military Duplicate" are no longer valid and military personnel who are citizens of the state and wish to retain their driving privileges should apply for a regular driver's license.

The old military permits were cancelled by the Washington State legislature. The moratorium which had previously existed on driver's licenses of citizens of the state serving in the armed forces was cancelled.

Renewal and exchange of driver's licenses cost $4 and can be accomplished by writing Driver's License Division, Department of Licenses, State of Washington, Olympia, Wash.

Military personnel from other states, stationed in Washington, must possess a driver's license from their home state or obtain a Washington license.

• **WO APPOINTMENTS** — Thirty-five chief petty officers and one first class have been issued temporary appointments to Warrant Officer W-1.

These appointments bring the total to 666 named from an eligibility list of 695 which was established by a selection board convened in April 1956.

Regular Navy appointments were broken down into the following designators: Boatswain (7132), 3; Surface Ordnance Technician (7232), 3; Machinist (7432), 10; Electrician (7542), 5; Aviation Electronics Technician (7612), 7; Communications Technician (7642), 1; Electronics Technician (7662), 1; Ship Repair Technician (7742), 1; Supply Clerk (7982), 2; Civil Engineer Corps (8492), 3.

QUIZ AWEIGH

Some of the past and future is included in this month's quiz. Sit back and relax, reminisce a bit and then gaze into the future—now you're ready

1. The fishing schooner *Hannah* was fitted out as this country's first warship. It was commissioned in Sept 1775 by (a) John Paul Jones (b) George Washington (c) Esek Hopkins

2. This was America's first flagship. It was the (a) 24-gun *Alfred* (b) 12-gun sloop *Providence* (c) 16-gun brig *Lexington*.

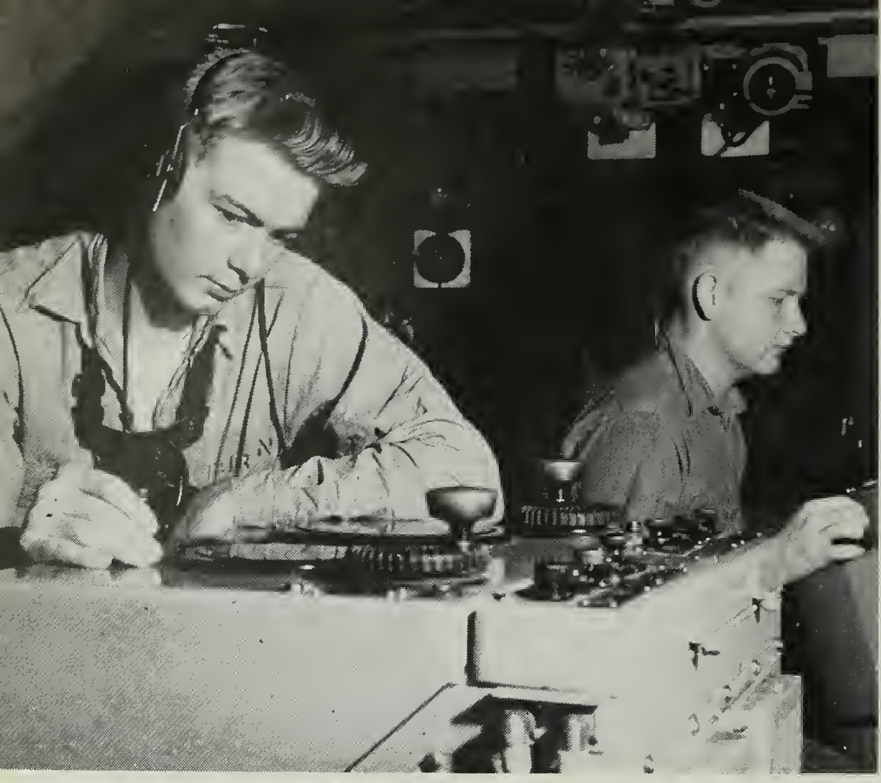
3. One of the Navy's newest and largest ships was commissioned last month. She's CVA-61 named (a) USS *Ranger* (b) USS *Independence* (c) USS *Kitty Hawk*.

4. While this, the third of the six 60,000-ton *Forrestal* carriers to be authorized was being commissioned at Portsmouth, Va., the nuclear-powered submarine USS Sargo, SS(N)583, was being prepared for launching on the West Coast. When christened this month Sargo will be the Navy's (a) fifth (b) seventh (c) tenth atomic sub.

5. This is one of the Navy's newest long-range surface-to-air guided missiles. Scheduled to join the Fleet next year, it's (a) *Polaris* (b) *Terrier* (c) *Talos*.

6. This missile, capable of speeds much faster than that of sound, will be the main armament of (a) USS *Compass Island* (EAG 153), (b) USS *Galveston* (CLG 3), (c) USS *Boston* (CAG 1).

Did you get a 4.0? If not, turn to page 51 to check the answers.



CIC ACTIVITIES: *Above:* Radar check *Below:* Vertical plot

Horizontal plottin

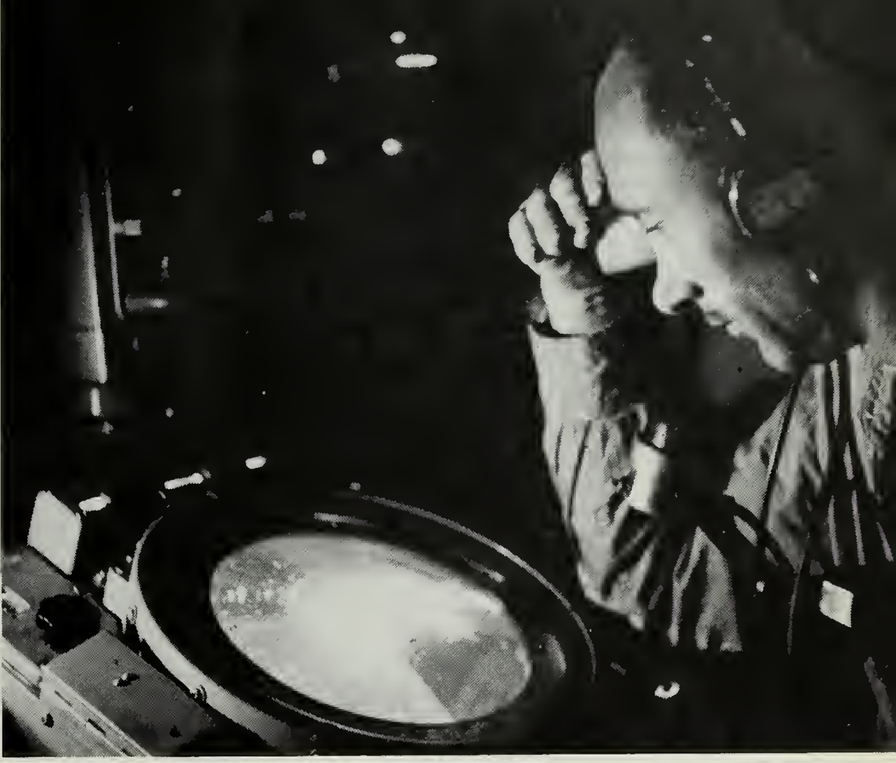
COMBAT

BEFORE THE DAYS of jet planes, missiles, radio, radar and sonar, naval warfare was a relatively simple affair. For instance, in the famous frigate duels of the War of 1812, the skipper of a ship could usually base his decisions on little more than his knowledge of his own situation, his seamanship and whatever he could find out about the enemy through his own eyes and reports from lookouts.

Nowadays, however, a battle might involve aircraft and missiles lauched many miles from the center of action, and the commander of a Fleet or the captain of even a single ship has to rely on information from many sources in order to find out what's going on. If the skipper himself had to go through all the reports from all these sources he'd be so tangled up in trivial details that he wouldn't have time to turn around—let alone make decisions—and, before he knew what had hit him he'd have lost the battle.

The solution to this problem is the *Combat Information Center,* where radar operators, plotters, talkers, status board keepers, evaluators, controllers and coordinators work to collect and assimilate the data so vital to a modern naval

board on cruiser



Radar watch

INFORMATION CENTER

operation with its many components.

In short, a Combat Information Center is the central unit of a single ship or force charged with collecting and assimilating combat data in order to advise the bridge of the present situation and possibilities of the future. Another way of looking at it is to regard it as an overgrown computer, consisting of many men and machines.

A child of the age of electronics, CIC grew up hand-in-hand with radar in World War II. RADM Samuel Eliot Morison, USNR, the naval historian, describes its development as follows:

"Early in the war, digestion of radar intelligence was confined to fighter-director officers and enlisted radar operators. The night actions around Guadalcanal convinced everyone that radar contacts should be plotted and expertly analyzed in a quiet spot away from darkened bridges. Ship's crews equipped a compartment in the superstructure as "radar plot" and the executive officer gravitated thither. Gradually radar plot absorbed other functions, becoming a terminal for radio, radar and lookout reports. Information received would be correlated and passed to bridge, gunnery, flag or other stations depending on its character. Thus, radar plot, as its scope and importance broadened, became the Combat Information Center, CIC. By the end of the war CIC was big business conducted in well protected compartments below, manned by as many as 50 men; it may be said to have usurped Bridge as the nerve center of the ship."

The core of CIC is still radar, which almost everyone in today's Navy knows, gets its name from "ra(dio) d(etection) a(nd) r(anging)." Radar isn't perfect, but, through its use of high-frequency radio waves to detect the presence and indicate the position of distant objects, it has practically eliminated the use of darkness, fog, camouflage or the sun's glare as effective cover for surprise attacks.

The image of any solid object (and even some not-so-solid ones, such as storms, etc.) can be picked up on the radar screen. Thus, right now in Radar Picket Submarines (SSRs), Radar Picket Destroyers (DDRs), Ocean Radar Station Ships (YAGRs) and radar-laden blimps and planes, CIC teams are watching their scopes 24 hours a day to detect the "pips" (radar contacts) that might turn out to be enemy aircraft headed for a sneak attack on the United States. (See September 1956 issue of ALL HANDS.)

To the uninitiated, a typical shipboard Combat Information Center is a noisy, dark and confusing outpost of Bedlam. A visitor, entering a darkened CIC for the first time, is confronted with an imposing array of radar repeaters for surface search, air search and height finding; a vertical plot, horizontal plots and status boards; radar operators, plotters, talkers, evaluators, controllers and AA coordinators—all complete with coffee cups and bystanders. To add body to the confusion there are loudspeakers rasping jargonese over several radio circuits, frequently interspersed with blasts from the intercom.

However, there is method to this madhouse. Here, in all this seeming confusion, reports and messages from lookouts, radio room, sonar shack, signal bridge, intelligence and radar operators are all brought together. These bits of information are then fitted into place like pieces of a jig-saw puzzle to form a complete picture of the situation around the ship. This picture shows up on the various plotting boards in the form of markings which indicate the posi-

SCOUTS OUT — Combat Information Centers get information from patrol ships and planes like DER and WV-2.

tions and movements of all the ships and planes in the area.

To keep things on an even keel during this complicated process, each member of the CIC team is assigned responsibility for at least one part of the puzzle. For example, on a typical DER during an air defense alert the men on duty would probably include the:

- ***Evaluator***—Usually the Exec or Operations Officer, he is the CO's representative in CIC. As his title implies, he's the man who evaluates the data gathered by the CIC team, after which he recommends a course of action to the skipper. He is responsible for the most effective possible use of all the ship's facilities for either defensive or offensive operations and he exercises over-all supervision of the Combat Information Center during General Quarters. Every man on the CIC team is working to assemble the incoming information for him.
- ***CIC Officer***—He is responsible for the efficient operation of the CIC and serves as the evaluator's principal assistant. Besides taking part in the evaluation process, he makes sure the displays showing positions of enemy and friendly forces are kept up to the minute, informs the operators of expected contacts and, in general, keeps things moving. Although that sounds fairly simple, his billet is the axis around which the whole CIC operation revolves.
- ***Air Controller***—He is the key man in an air defense operation, keeping track of friendly and enemy aircraft and directing the Combat Air Patrol (CAP) assigned to his ship. It's up to him to make sure enemy planes don't get through, to see that his own planes make it back to their base, to keep the evaluator informed of the air situation and to see that what's going on in the air is accurately displayed.
- ***Gunnery Liaison Officer***—An experienced officer from the Gunnery Department, he is responsible for disseminating target designation data to the gunnery control stations and for keeping the target designation and fire control radar systems functioning smoothly.
- ***Electronic Countermeasures Officer***—Under the direction of the CIC officer, the ECM officer is responsible for countering the enemy's electronic efforts.
- ***CIC Supervisor***—The leading petty officer in the Combat Information Center, he helps the CIC officer keep things moving.
- ***Air and Surface Search Radar Operators***—Stationed at various radar consoles, they keep up a continuous search of surface and air contacts, reporting ranges, bearings and altitudes to the air and surface summary plotters.
- ***Airborne Early Warning Radar Master Repeater Operator***—When an AEW plane is aloft, he tracks it and controls the AEW radar scope presentation.
- ***DRT Plotter***—He is stationed at the Dead Reckoning Tracer, a device used to keep a continuous, up-to-the-minute plot of all ships within range of his ship's radar. He keeps the DRT set to the right scale and

PLOTTING VICTORY — Like many of todays tactics CICs grew out of experience gained in WW II. These destroyermen plot support for Borneo invasion.

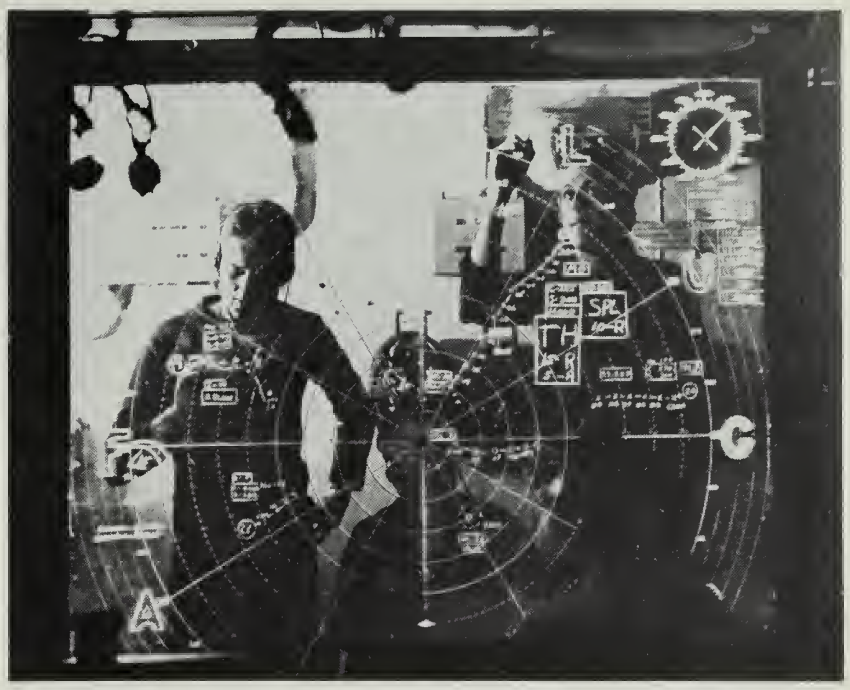
helps work relative motion problems (the solutions of which show the movement of his ship as related to the movements of other ships). From this information it is possible to determine the speed and course required for approaching a target or changing station in formation.

- ***Air and Surface Summary Plotters***—These men are posted behind the vertical air and surface summary plots, on which they mark the location of aircraft, ships and submarines picked up on radar and sonar. They also determine, from the changing positions of these markings, the courses and speeds of the contacts.
- ***CI Net Plotter***—Stationed in front of the vertical air summary plot, he plots the data that comes in over the Combat Information Radio Telephone Network.
- ***Maneuvering Board Operator***—His post is a plotting table, on which he works out courses, speeds, closest points of approach and other relative motion problems. He passes the solutions along to the evaluator, who uses them in recommending courses and speeds to the CO.
- ***DRT Recorder***—He furnishes the DRT plotter with surface contact information and keeps up the bearing book while navigating.
- ***Radio Recorders***—They log all traffic on the various radio telephone nets, keep up radio logs, help break or translate tactical signals and send messages as directed.
- ***Sound Powered Telephone Talker***—He relays appropriate incoming or outgoing information on his assigned circuit.
- ***Assistant GLO***—His principal duty is to assist the Gunnery Liaison Officer in operating the target designation system.
- ***Electronic Technician***—He keeps the equipment working the way it should.

As you can see from the length of this list, it takes a lot of men to run a CIC during an air defense operation, but don't get the idea that air defense is CIC's only job.

The CIC team also has plenty to do during search and rescue operations, when the ship is entering or leaving port, when visibility is poor, during tactical maneuvers, in shore bombardment and amphibious operations, in anti-submarine warfare or even during a "Man Overboard."

For example, if a ship or submarine is in distress, or a plane goes down, the CIC team either coordinates the search and rescue effort or helps to coordinate it by relaying information to command. It also attempts to establish communications with the stricken craft, tries to get a bearing on it and advises the bridge on the course to follow to reach it.



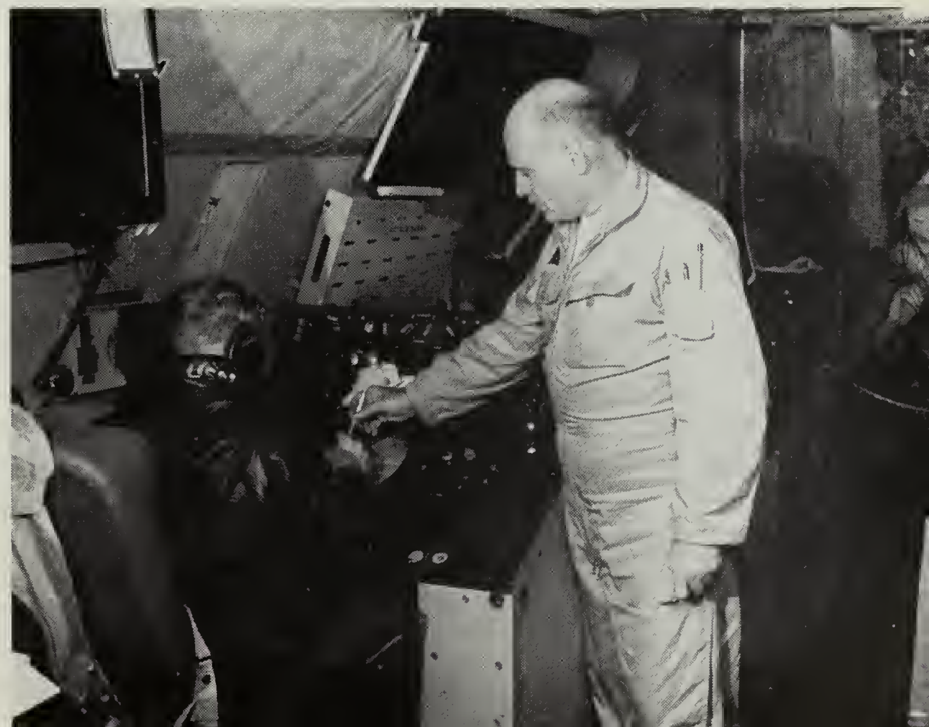
SHIP'S NERVE CENTER, the CIC, digests, computes and correlates data for ship's skipper and commander of the Fleet for their evaluation and use.

If a plane is lost, but still aloft, CIC tries to pick it up on air search radar and vectors it (gives it a course or compass direction to follow) to a safe landing area. When the situation's really "hairy," (i.e., fuel is low and there is no other place to land), the plane may be vectored to a ship so that its occupants can be picked up quickly after they bail out or ditch the aircraft.

In this, as in most of CIC's other functions, human lives depend on the teamwork and efficiency of the men in that dark, "confused" room called Combat Information Center.

—Jerry Wolff

HIGH FLYING CIC — Combat Information Centers take to the air in Navy's Airborne Early Warning planes. Here, CIC officer of WV-2 checks scope.



REGULUS II takes a test flight before becoming operational. *Below: Bullpup* is latest air-to-ground-missile.

NEWS OF NAVY'S

While some of the ships and most of the planes in the Fleet have been equipped to carry guided missiles and rockets, other missiles and rockets, newer and more powerful, are being developed and tested to take their place. (See ALL HANDS special issue on the "Guided Missile Navy," March 1957.)

Here's a brief roundup on the latest changes and developments in the Guided Missile Navy:

- ***Sidewinder*** — This nine-foot long missile which operates on a "heat homing" guidance system is being seen all over these days. The Atlantic and Pacific Fleets are now equipped with this new missile which is said to extend greatly the kill range of a fighter or bomber. Proof of *Sidewinder's* accuracy was shown in its first public demonstration when a fighter knocked a drone out of the sky with its first shot.
- ***Bullpup*** — A new 600-pound air-to-surface missile, this one was developed for Navy and Marine aircraft for use in close air support of ground troops. The basic concept of this relatively inexpensive missile was conceived during the Korean conflict when pilots, flying close support and low-level bombing missions, were bothered by concentrated enemy small-arms fire. The 11-foot long *Bullpup,* now in the evaluation stage, is expected to give Navy and Marine Corps light attack aircraft greater capabilities against pillboxes, tanks, truck convoys and railroad yards.
- ***Sparrow III*** — An air-to-air, supersonic guided missile, which can be fired above or through clouds with complete accuracy, *Sparrow III* has been called the most advanced weapon of its time. It is 12 feet long, weighs about 350 pounds and attains a speed of over 1500 mph within seconds after launching. All-weather fighters now in the Fleet can carry *Sparrow III.* The new improved missile will replace *Sparrow I.*
- ***Talos*** — An addition to the arsenal of the Fleet early next year will be the Navy's long-range, surface-to-air guided missile *Talos.* It will form the major armament of the light cruiser USS *Galveston* (CLG 3) when she goes to sea in April 1958 after completing her conversion to a guided-missile cruiser. In 1959, two other cruisers, USS *Little Rock* (CLG 4) and *Oklahoma City* (CLG 5), both armed with *Talos* missiles, are scheduled to rejoin the Fleet and will greatly increase its antiaircraft defense capability. The first nuclear-powered cruiser, USS *Long Beach,*

COMING ATTRACTIONS: Long-range *Talos,* surface-to-air guided missile, joins Fleet next year. It will arm CLGs that are now being built or converted.

MISSILES

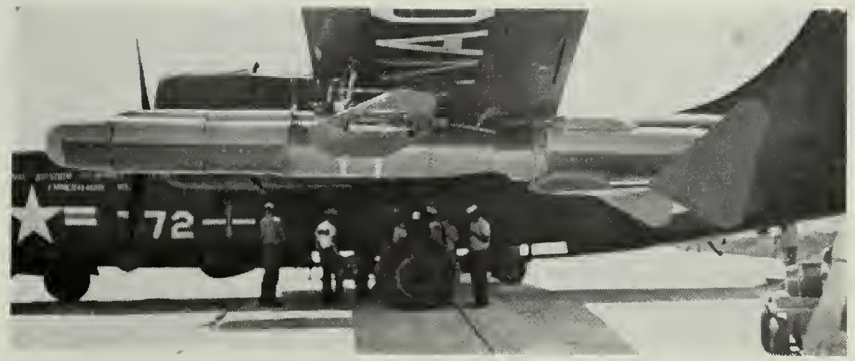
CG(N) 9, will also be armed with *Talos*. Evidence as to the accuracy of this missile was demonstrated during its development tests in May, 1954, when it "killed" a drone at 25 miles with a direct hit. So reliable have the tests been over the years, the Navy is making the first direct shipboard installation of *Talos* in a first-line cruiser. The missile, which carries a proximity fuse to detonate the warhead, is capable of delivering a high explosive or nuclear warhead, as circumstances dictate, at any altitude airplanes can now fly, and far beyond the range of human vision. It can also be used against enemy ship and shore bombardment targets.

- ***Polaris*** — This surface-to-surface 1500-mile range ballistic missile, which should become operational in a few years, is the subject of a $10-million contract. The contract calls for the design and manufacture of complicated handling and launching systems for the missile, and will involve the development of both electrical and mechanical devices for launching. The program will involve a series of experimental systems, leading ultimately to surface ship and submarine launching systems for *Polaris*.

- ***Hasp*** — All missiles are not designed to deliver death at the end of the line. *Hasp* is a high-speed antiaircraft rocket, converted into a collector of weather data for naval shipboard use. The high-altitude sounding projectile is a single stage, solid-propellent rocket that can be fired from five-inch guns. When the final model is fired, the rocket motor and the dart, or smaller forward part, climb as one unit to about 2600 feet. At this point, the propelling charge burns out, and the rocket booster falls back to earth. The dart coasts upward to more than 100,000 feet in approximately 70 seconds. At the summit of the flight, a timing device in the dart's nose splits open the casing and ejects instruments to measure temperature and humidity in the ionosphere. A balloon, inflated when the casing splits, then lowers the electronic equipment slowly to earth.

As the balloon descends, an automatic transmitter-receiver supplies weather data to an electronic computer aboard ship far below.

ON TARGET—*Talos* heads for target drone. *Below rt.: Sidewinders* are seen throughout Fleet. *Left: Sparrow I* will be replaced by improved *Sparrow III.*



AT SEA—*Terrier* leaves launcher of *USS Canberra* (CAG 2). *Above:* Ship-destroying *Petrel* is checked in launcher.

ENLISTED MEN'S COLLEGE

LAST YEAR A WRITTEN TEST was given to a group of enlisted Navymen. The test wasn't for advancement in rate, nor was it an exam for a chance to become an officer at OCS. These men were competing for a college education, with the Navy paying the bill.

Of the group, 54 men were selected for the first segment of the Navy Enlisted Advanced School Program (NEASP). The program, which was launched at Purdue University in West Lafayette, Ind., calls for two years at the School of Engineering. Upon completion of the freshman and sophomore years, the participants will return to the Fleet for four years. Then, if qualified, they will return to college for their final years and a degree in engineering.

The program is designed to provide the Navy with "engineering skill in uniform." These men are preparing to operate the complex electrical-electronic and nuclear systems of the modern Navy. They will learn, in a span of eight years, all phases of engineering.

Before going to Purdue, in September 1956, the selected men reported to the Naval Preparatory School at the Naval Training Center in Bainbridge, Md., for four weeks of instruction. From Bainbridge they reported to Captain Alden Schwarz, USN, Commanding Officer of NROTC at the University.

During their first term, the members of the NEASP found themselves confronted with one of the hardest tasks of their naval careers—for it's no easy job to switch from sailor to college student almost overnight.

Walter T. Chapman, AT1, USN, summed up the situation when he said, "I'm glad I had a chance to go through both Class A and B schools in the Navy, because they helped me to keep up in study habits. But even so, developing study habits was the hardest job we faced at NEASP."

In spite of this difficulty, the Navymen turned in an impressive first term grade average. The University average for the term was 4.122. The NEASP members topped this figure, averaging a 4.35. They also bettered the Navy contract students in NROTC by an overall average of two per cent. Their first term statistics alone show the great amount of time these men put into their studies.

Only in a few cases have any of the men in the program had higher than a high school education in civilian life. A couple of them didn't even have that much of an education when they first entered the Navy. One such Navyman is Raymond G. Phillips, FTI, USN.

Phillips quit high school at the beginning of his sophomore year. A native of Oregon, he was naturally an outdoor man. He especially liked the water—liked it well enough to join the Navy. But once in the service it didn't take him long to realize the value of having a high school diploma. So, by studying in his spare time through correspondence he soon earned one.

After that Phillips wanted to go on to college. He was interested in both electronics and forestry, and wrote to Oregon State College for entrance examinations. After passing the tests, he was notified of his acceptance to the School of Forestry. This created a problem. Ray didn't particularly want to leave the Navy, but strongly felt the need to further his education.

He had almost decided to return to civilian life, when he was informed that he was qualified to take the test for NEASP. This was really to his liking. Here was a chance to go to college and still stay in the Navy. He took the test, which consisted of physics, mathematics, electricity, and electronics, and was one of the men selected. He came—he studied—he stayed.

Recently Phillips and five other NEASP students sat in a classroom at the NROTC building and discussed their feelings toward the program. Here is how one of them, Bruce D. Martz Jr., ET1, USN, phrased it:

"We like engineering. If we didn't we wouldn't have bothered to take the tests. My ideas on the program are the same as those of everyone else that I have talked to. We plan to use this training in the Navy, and for the Navy. That's the least we can do after getting an opportunity like this."

Also like the others, Martz feels that the Navy has the right idea by not having the men go to school for the full four years at one time. By going back to sea after their first two years at Purdue they will have a chance to keep abreast of the new types of equipment the Navy will be using by the time they finish school.

"It may take us longer to get a degree that way," Walt Chapman said, "But when we finally do get our sheepskins we will really be qualified to handle all kinds of

Navy engineering problems. And the chance at a degree really gives us something to work for."

The men take their tests for advancement in rate at the same time as the rest of the Fleet. The NEASP Navyman, however, does not have to submit correspondence courses to qualify in his rate. Speaking of advancement in rating for the students at Purdue, one of the members had this to say about their future status in the Navy.

"All of us in the program want to become officers. It is pretty easy to understand why. These degrees in engineering could get anyone of us a good paying job in civilian life. I am sure the Navy would not expect us to be so highly trained, yet still draw the pay of a whitehat. Some of the fellows are already scheduled for OCS. The rest of us will get our chance at becoming officers later on. We all feel that if the Navy thinks enough of our abilities to send us to college and gives us the opportunity to become officers, we won't disappoint them by getting out before our retirement date."

One of the things the NEASP members like best about the program is being on their own. There is no pressure on them as to the amount of time they must spend on their studies. Each man realizes just how much time he, as an individual, must spend in outside reading and research. The men have been told that for the best results in grades the average student needs to spend four hours on outside studying for each two hours in the classroom.

For most of them this seems to be the right amount of time needed to maintain better than average grades. For some, however, more than four hours is needed.

They are allowed only one class failure. Should they fail, and a few have, in two or more courses they are taken out of the program and reassigned to duty elsewhere.

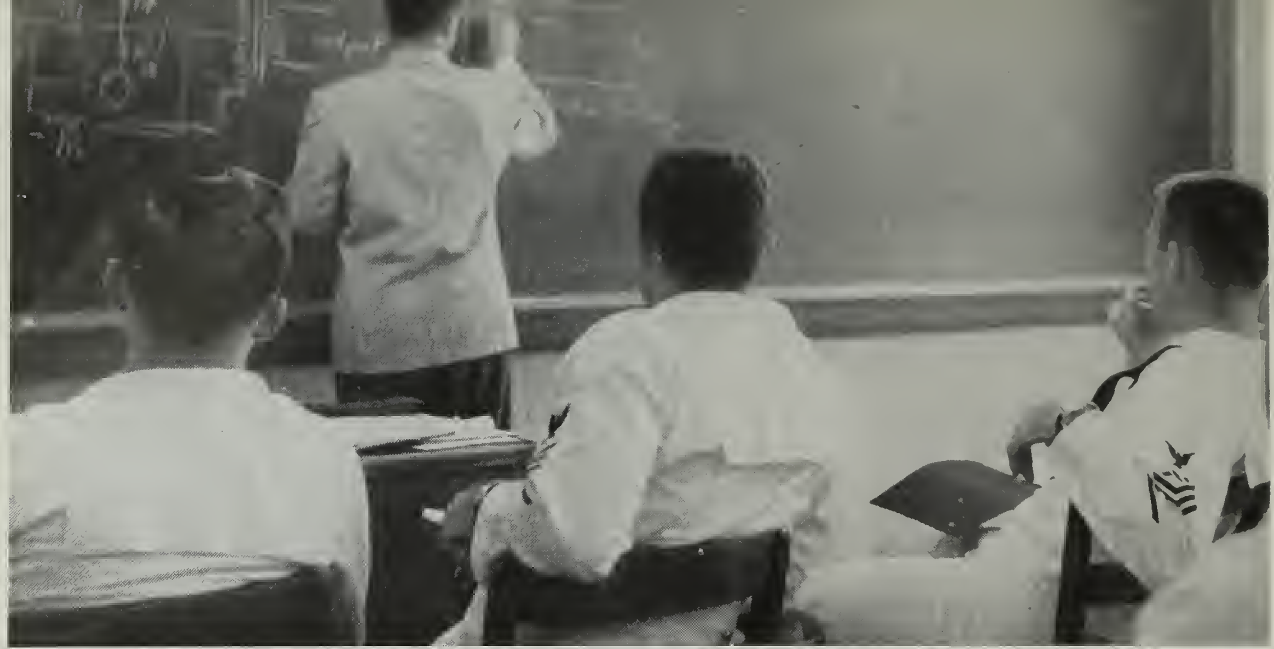
If at any time an instructor of any course feels that the subject he is teaching is not a challenge to a Navyman in his class, he gives him a test equal to a final exam. If the score is high enough in the test, the student is given credit for the subject, and is placed in a more advanced course.

Several of the members feel they have somewhat of an advantage over the other Purdue students. One such advantage was pointed out by Ara Sagerian, AT1, USN (better known to his classmates as Ziggie).

"Most of us are in the freshman or sophomore classes. Students in most of our courses are usually younger than we are. The majority of them are just out of high school. They are not familiar with electronics, while all of us have worked with various types of electrical equipment in the Navy. This gives us a slight edge over them, especially during lab periods."

If you were to go to the campus you would find it almost impossible to pick out the Navymen from the other students. The NEASP members wear civilian clothes while attending classes (they put on their

SKILLED ENGINEERS are one of the many needs of our modern electronic, nuclear Navy. *Below:* At home Navy student explains slide rule to his wife.


BULKHEAD CHART helps Navy students solve a complex electronics problem in classroom at Purdue University.

uniforms to pose for the photos on these pages). All of their courses are with the other students. They do not attend as a Navy unit, nor do they march to classes as cadets do at certain well known military institutions.

Of course, if you were to listen to some of their conversations in the classrooms, student union, or off-campus restaurants you could probably pick out a few of the men from the Navy words like "bulkhead" and "deck" that they use while talking.

Single students in the program are housed in dormitories, while married men, who comprise almost 80 per cent of the group, live with their families in the campus housing area, which consists mostly of small barrack-type quarters. Like typical Navy families they have done a good job in making cramped temporary apartments quite livable.

Many of the wives had been accustomed to larger housing facilities at their husband's last duty station. This, in some cases, caused a problem when their furniture arrived at West Lafayette last fall. The families found that a lot of rearranging had to be done before it would all fit into their new quarters.

The Navy wife at Purdue is a quiet heroine behind the scene. There isn't much mention about the part she plays in her college-husband's life. She has found out, since her spouse began going to classes, that he isn't able to devote as much time to her and the children as he had done at previous stations.

Most of the wives have accepted the fact that for two years their husbands will have to study during most of their spare time. It has been pointed out to each of them that she is a big factor in the successful completion of her husband's first two years at Purdue. Should she be inclined to complain about how much time is being spent on studies, or about the living conditions, she realizes that eventually it will show up in her husband's grades.

The typical wife is happy about the fact her husband is getting this chance to go to college. She feels that the inconveniences that she may have now will be well rewarded in the future when she sees a diploma in engineering handed to her husband.

However, with a program such as this, it can't be all work and no play. The NEASP students have become well adjusted to the campus way of participating in extra activities. They

NEASP STUDENTS not only get a college education at Purdue University, but many of them are planning to apply for OCS and careers as naval officers.

are all eligible to enter competitive sports in both Big Ten and intramural programs. Taking advantage of being able to compete for varsity honors, one member was elected captain of the Purdue bowling team last season.

In intramural sports the Navy boys have entered in just about all of the activities offered by the college. During the softball season they were defeated only twice. And, those losses were forfeits caused by not enough men on the field. In addition to the sports they participate in, four of the men are taking advantage of discounts offered to them as students at Purdue and they are learning to fly small aircraft.

Not to be outdone by their husbands, the women are in the process of forming a Navy Wives Club. They also have been spending spare time by raising vegetables in gardens that are located just a close distance from the housing area.

To make their outside interests complete, the men have formed their own fraternity. They have dubbed it Upsilon Sigma Nu, or just USN for short. The only students eligible to join the frat are the men participating in the program. They have high hopes the fraternity will be in existence long after they have received their degrees. With new men coming into the program next year at Purdue, *and with a similar program scheduled to start at the University of Washington this fall,* they feel confident they will soon have a real "going" fraternity.

During the latter part of the summer all of the men, with the exception of one, will leave Purdue for four weeks' TAD in field training. Having been placed in nine groups, they will leave West Lafayette in August for summer assignments at the:

Naval Research Laboratory, Washington, D. C.; Naval Air Test Center, Patuxent River, Md.; Naval Air Development and Material Center, Johnsville, Pa.; Signal Corps Engineering Laboratory, Fort Monmouth, New Jersey; New York Naval Shipyard, Brooklyn, New York; Naval Air Missile Test Facility, White Sands Proving Ground, New Mexico; Naval Air Missile Test Center, Point Mugu, Calif.; Naval Ordnance Laboratory, Corona, Calif.; and Naval Electronics Laboratory, San Diego, Calif.

Stephen Johnson, Jr., ET1, USN, will be the one student in the program staying at Purdue for the entire summer. He will get his on-the-job-training in the University Physics Department, where he will help with research on the subject of "solid state properties." To show you how advanced the NEASP students are, this project consists of work in "temperature electrical measurements and irradiation of semi-conductors."

This fall when the University of Washington, in Seattle, joins Purdue in training NEASP students, 100 additional men will be under this program, divided about equally between Washington and Purdue.

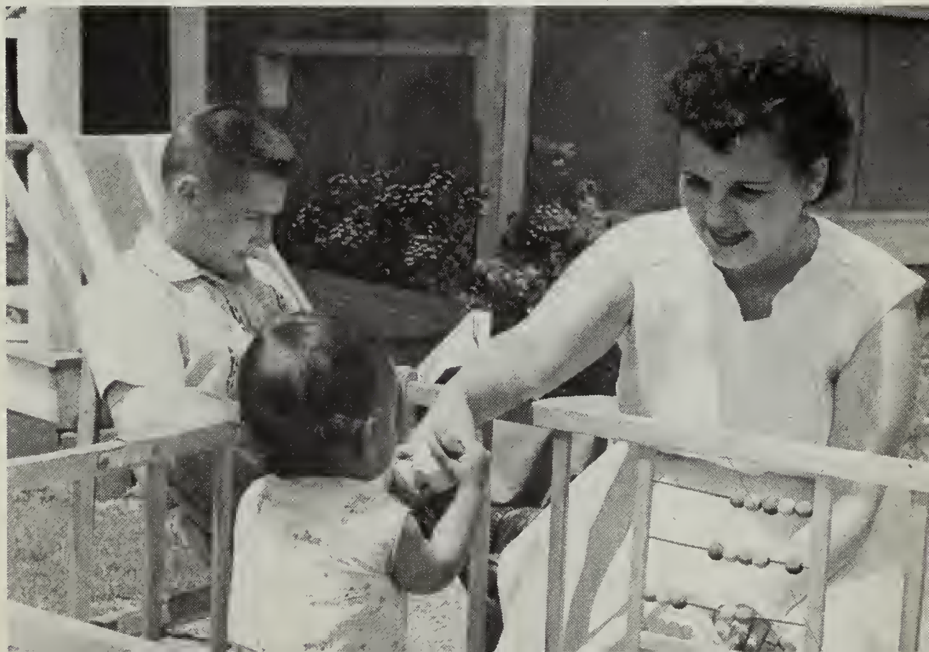
Before going to Washington the newly selected Navymen were placed in two groups and sent to preparatory school for nine weeks. One group was ordered to San Diego for school, while the other group is at Bainbridge.

The Navymen at Purdue have one bit of advice for the men entering the U of W next fall. "The sooner these new fellows learn the value of hard study outside the classroom, the easier it will be on them—does a lot for their grades too."

—Ned Goodwin, JO3, USN.

DADDY'S LITTLE HELPER watches as her father musters for extra hours of study which will help keep him sailing smoothly through any spots in course.

BETTER HALFS of Navy students are forming a Navy Wives Club for times when their husbands are busy with the books or other phases of college life.



LETTERS TO THE EDITOR

Shorvey-Seavey Tables

SIR: I found your Shorvey and Seavey discussion in the January issue interesting reading. However, your table of activities by type and city for the 13th Naval District seems erroneous in some places.

I believe you omitted a Naval Supply Depot at Spokane although I am not sure there is an enlisted allowance for it. And, you listed a "Naval Station" at Bremerton that was actually a naval barracks which was recently disestablished and absorbed in the Puget Sound Naval Shipyard. There are also Naval Stations at Astoria (Naval Station Tongue Point), Seattle and Tacoma—and Reserve Fleet Groups at Astoria (Columbia River Group), Bremerton and Tacoma. In addition, there is an Intelligence Office in conjunction with the Headquarters, Thirteenth Naval District located in Seattle—H. M. M., Capt., USN.

• *There is a Naval Supply Depot at Spokane which is operated on a maintenance status. However, it has an enlisted allowance of only four persons. At the time the January* ALL HANDS *was published, there was a naval barracks at Bremerton which was listed under the category of Naval Stations.*

The Naval Stations at Tongue Point, Seattle and Tacoma; Reserve Fleet Groups at Astoria, Bremerton and Tacoma; and the Intelligence Office in Seattle were inadvertently omitted in our presentation. They will be added to any future revisions to this listing. Thanks for calling our attention to these discrepancies.

We would be interested in hearing from other localities which have noted any errors of this nature.—ED.

This section is open to unofficial communications from within the naval service on matters of general interest. However, it is not intended to conflict in any way with Navy Regulations regarding the forwarding of official mail through channels, nor is it to substitute for the policy of obtaining information from local commands in all possible instances. Do not send postage or return envelopes. Sign full name and address. Address letter to Editor, ALL HANDS, Room 1809, Bureau of Naval Personnel, Navy Dept., Washington, 25, D. C.

National Defense Service Medal

SIR: The National Defense Service Medal was authorized about three years ago but as yet I haven't seen "hide nor hair" of one. Am I one of the 10 per cent that never gets the word—or haven't they been distributed? — W. S. C. Jr., LT., USN.

• *Because of the large number of persons eligible for the National Defense Service Medal, full scale distribution cannot be made until an adequate supply of them is on hand. However, it is expected that enough of them will be available so that distribution can be begun during current ('58) fiscal year.*

The medal is awarded for active service in the armed forces sometime during the period between 27 Jun '50 and 27 Jul '54.—ED.

SALTY TRADITION—True to the customs of the sea Navymen of *USS Bennington* (CVA 20) deck themselves out for equator-crossing ceremonies at sea.

Family Allowances

SIR: I have run into a difference of opinion about family allowances.

My 16-year-old son recently got an afternoon job. He will earn more than $600 during the year. I know that for the purpose of income tax, I can't claim him as a dependent, but I was in doubt as to whether I could continue to receive the Basic Allowance for Quarters for him as a dependent. I asked the ship's legal officer about it and he told me that I was entitled to receive the full allowance for my son until his 21st birthday, regardless of the child's income.

In a later discussion with some chiefs, a similar question was brought up. A chief disbursing clerk was present and he said that once a dependent was lost for income tax exemptions, the family allowance was lost too.

I am wondering about the possibility of having a pay stoppage at some later date because I failed to have the right information. Could you settle this for me?—J. N. S., BMC, USN.

• *Your ship's legal officer was right, Chief, which proves once again that it's a good idea to rely on authority, rather than scuttlebutt.*

Under the Dependents Assistance Act of 1950, the term "dependent" includes unmarried legitimate children under 21 years of age. Your entitlement to Basic Allowance for Quarters is not affected by the child's employment or other income.

However, if your son should enter the armed forces before he is 21, you no longer would get an allowance for him since he is entitled to quarters in his own right.

And, incidentally, you're wrong about not being able to claim your son as a dependent for income tax purposes. Any child who is under 19 or who attends school (regardless of his age), may be claimed as a dependent—no matter what the child's income—if he receives more than half of his support from his parents.—ED.

Lost Orders

SIR: Could you tell me how to go about obtaining original orders for a man who loses his during travel?—W.M.H., HM1, USN.

• *Since the Bureau of Naval Personnel only gives authority for and does not actually issue transfer orders, a letter should be sent to the command issuing them, requesting an authenticated copy.*—ED.

Medicare for Fleet Reservists

SIR: I am interested in your interpretations of Public Law 569 (Dependents Medical Care Act). After reading your Rights and Benefits issue (May 1957) there's one point on which I am still not clear. Possibly you can straighten me out.

You say "eligibility for civilian medical care is limited to the lawful wife (or dependent lawful husband) and children who are dependents of *active duty members* of the uniformed services."

However, when I was returning from Europe last month aboard an MSTS transport, the medical officer (Army) advised us that members of the Fleet Reserve and their dependents are eligible for civilian medical care. He said his info was based on a letter dated in early April. Did your Rights and Benefits issue go to press before this information was known or what?

If there's two different schools of thought as to who is and who isn't eligible, how about cutting me in? —E. S. M., YNC, USNFR.

• *As we said in our Rights and Benefits issue in May '57, the provisions of the Dependent's Medical Care Act (P.L. 569) pertaining to civilian medical care are not applicable to retired or Fleet Reserve personnel and their dependents. Although we went to press in April, there isn't any change to this.*

Retired or Fleet Reserve personnel and their dependents ARE *eligible for medical care provided in uniformed services medical facilities (that is, military facilities) subject to the priorities or limitations established by the various services and subject to the availability of space, facilities and capabilities of the staff.*

In addition to the medical treatment facilities of the Army, Navy and Air Force, Fleet Reservists and retired personnel and dependents are also entitled to use the medical treatment facilities of the Public Health Service on a space available basis.—ED.

And Be Careful When You Say It

SIR: What is the correct way to pass the word for a chief petty officer over the ship's public address system?

One of the boatswain's mates insists that it would be, "Smith, boatswain's mate chief."

I think it should be "Smith, chief boatswain's mate," and I seem to recall reading something to that effect in ALL HANDS several years ago.

Am I right?—V. C. M., YN1, USN.

• *You are, and, in case you're interested, it was in August 1953, that we last answered that question.*

Actually, there is no such rate as "boatswain's mate, chief," although the abbreviation for chief boatswain's mate is BMC.

The "C" following the designation is the cause of the confusion, but it comes last only for the purposes of efficiency in tabulating machine records. For this reason the abbreviation BMC rather than CBM is used.

However, when spoken, the rate is "chief boatswain's mate." And "boatswain's mate chief?" . . . Never!—ED.

MANNING THE RAIL—Crew of *USS Toledo* (CA 133) stands at attention as ship poses for portrait. She is one of Navy's ships with daily exercise club.

Amount of Retainer Pay

SIR: Could you tell me how much retainer pay I would get if I transferred to the Fleet Reserve upon completing 21 years, six months and 10 days of continuous service?

How about after 22 years, 10 days? —A. C. L. Jr., AGC, USN.

• *You would receive the same amount for 22 years, 10 days as you would for 21 years, six months and 10 days. Your retainer pay would be $175.89 per month. That's figured at the rate of 2½ per cent x 22 x the basic pay for 22 years ($319.80). Enlisted personnel transferring to the Fleet Reserve are entitled to count six months or more as a full year for basic pay as well as active federal service.*—ED.

Amount of Retirement Pay

SIR: I'm not certain just what's what regarding retirement pay. If you can answer the following question, I'm sure that many other officers will appreciate the info as well.

I am of the opinion that for purpose of retirement pay, a period of more than six months is credited as a full year. However, to receive retirement pay based on a pay period you must actually complete the pay period. Thus, an officer completing 25½ years would receive 65 per cent of the basic pay for 22 years, while an officer retiring on 26½ years would be credited with 27 years or 67½ per cent of the basic pay for 26 years' service. Am I right or wrong?—L. T., LCDR., USN.

• *You are perfectly correct. An officer retiring after 25½ years would receive 65 per cent of the basic pay for 22 years while an officer retiring on 26½ years would receive 67½ per cent of the basic pay for 26 years' service.*

For retirement purposes under present law, a fractional year of six months or more counts as a full year only in computing the number of years of service on which the 2½ per cent multiple is to be applied. The fractional year does not count as a full year toward entering a new basic pay period. For the purpose of basic pay, the full time must be served.—ED.

Journalist Data Record Card

SIR: About two years ago all enlisted journalists were required to submit a Journalist Data Record Card to the Chief of Information. Since then I have not seen any instructions concerning the submission of these cards. Are they still required?—J. W. B., JO2, USN.

• *Yes, they are, and you should submit one pronto. Details for submitting Journalist Data Record Cards can be found in section 0408, paragraph 4, page 21 of the PubInfo "Bible"* (U. S. Navy Public Information Manual, *NavExos P-1035). It states that all Journalists on active duty throughout the Navy are required to submit to CHINFO annually on 1 July, a copy of the Journalist Record Card (NavExos 3964). These cards may be obtained from all District Publication and Printing Offices.* —ED.

Iowa's Guns

SIR: A question has arisen among several World War II sailors and myself (I'm a 22-year man) regarding the size of the guns on USS *Iowa* (BB 61). They say she has 18-inch guns, but I maintain that she carries 16-inchers. Who's correct?—J. R. Z., MMLC, USNFR.

• *You are, and if you'd like, you can tell those guys to listen to the oldtimer next time.*—ED.

Courageous Sailor Brings Efficiency into the Home

Sir: Six years ago while on recruiting duty I met, and married a girl from Council Bluffs, Iowa. As you know Iowa is pretty far from the sea and my wife was not too well versed on the Navy way of life.

Therefore, right after we were married I drew up a Plan of the Day to be followed while we were together on shore duty. Possibly your readers would like to follow a plan similar to this:

Wife's Plan of the Day

(week-days)

Sunrise: 0430
Sunset: 1943

Uniform of the Day:
Clean Housedress

0645—Reveille—Have hot water drawn, stand by for husband's shave.
0650—Call husband.
0705—Pipe down breakfast.
0720—Away husband for work.
0725—Tidy bunk in accordance with House Inst. 1403.5.
0730—Wife muster in kitchen. Turn-to on dishes.
0800—Commence field day (trash day on Monday only).
1115—Prepare dinner (wife's choice of chow).
1140—Stand by to receive husband.
1145—Husband return home. Zone inspections held on Friday.
1200—Pipe down dinner.
1210—Discuss current affairs.
1220—Wife turn-to on dishes. Shine husband's shoes.
1230—Read mail. Wife explain bills.
1245—Away husband for work.
1300—Wife sew buttons on shirts or darn socks. TV may be turned on if so desired.
1345—Wife may relax and read suitable publications (to be selected by husband). (Tuesdays, turn-to on ironing.)
1400—Lay down to Commissary and draw supplies.
1420—Liberty for wife, Monday and Wednesday only (to expire prior to 1700).
1430—Pipe sweeper, clean sweepdown topside and below decks, fore and aft (Tuesday and Friday). Polish silverware on Thursday.
1500—Draw up schedule for work to be done on weekends. Answer all correspondence (in duplicate).
1630—Freshen up for husband.
1700—Have shower ready; stand by for husband.
1715—Husband return from work.
1720—Wife help with Navy training course.
1745—Pipe down supper (husband's choice).
1815—Wife turn-to on dishes.
1845—Figure out husband's allowance from allotment check.
1914—Wife lay aft 8 o'clock reports in hall abaft messing compartment.
1930—Monday—Husband go bowling.
Tuesday—Watch TV (or go to movies if so desired).
Wednesday—Lodge night for husband. Wife entertain Bridge Club.
Thursday—Visit friends/or friends visit.
Friday—Stay at home.
2130—Wife tidy house (except Friday).
2200—Husband draw snack from refrigerator.
2245—Turn in your bunks, lights out, silence about the deck.
Saturday and Sunday, Holiday routine.

—D. J. R. BMI, USN

• *The entire* All Hands *staff wishes you the best of luck when you muster up enough courage to show it to your wife.*—Ed.

Where's Tucker, and Herbert?

Sir: Could you furnish me with any information about the accomplishments and disposition of USS *Tucker* (DD 57) and *Herbert* (DD 160)? A friend of mine served in these ships as a seaman in 1919 and 1920, and he's wondering what ever happened to them.—J. W. A., YN2, USN.

• *Sorry there isn't more information on* Tucker *(DD 57) other than the fact that she was stricken from the list and transferred to the U. S. Coast Guard 25 Mar 1926. She was returned and added to the Navy Register in an "out of commission status" on 30 Jun 1933. She was again stricken from the Navy List 24 Oct 1936.*

In the case of Herbert, *she was decommissioned 25 Sep 1945, stricken 24 Oct 1945 and sold to a firm in Baltimore, Md., 23 May 1946 for $7,500. But before that, the old girl had quite a record. Your friend was probably on board when she went into commission 21 Nov 1919 and most likely remembers her first commanding officer, LCDR E. A. Logan. There's quite a gap in* Herbert's *history from her commissioning date until 1941.*

At the time of Pearl Harbor, she had been on convoy runs and anti-submarine sweeps in the North Atlantic. After her conversion at the Charleston, S. C. Navy Yard to APD 22 in January 1944, she transited the Canal to the Pacific, where she earned seven battle stars—for Hollandia; Western New Guinea operations including the Biak Island and Cape Sansapor operations, and Morotai landings; the Leyte operation and Ormoc Bay landings; the Mindoro landings; the assault and occupation of Iwo Jima; assault and occupation of Okinawa Gunto; and finally, for minesweeping operations, Pacific. You can tell your friend that the old four-stack Herbert, *like many of the other famous four-stackers, made quite a name for herself.*—Ed.

From FT to RD

Sir: I would like to get some information regarding a change back to my old rate of RD1. I attended the special Fire Control Technician Conversion "A" school at Washington, D. C.

While there, Radarman "B" school for maintenance was opened. The courses of instruction for these two schools are almost parallel to each other, and I'm wondering if it would be possible for me to revert to radarman. —C. W. M., FT1, USN.

• *As you know there is considerable similarity in many of the qualifications for these two rates.*

If you feel that you are qualified, it is suggested that you submit a request in accordance with BuPers Inst. 1440.5B.

Action on your request will be based on your qualifications, recommendation of your CO and needs of the service. —Ed.

Length of Shore Duty Tours

Sir: I am writing to you in regard to an interpretation of BuPers Inst. 1306.62, pertaining to length of shore duty tours.

What are the tours of shore duty in the following cases: (1) an HM3, USN-S, who has been advanced from HN; (2) an HM3, USN, who has advanced from HN: (3) a PN3, USN, who has advanced from PNSN? None have been at sea.

If the tours of duty in the above cases are shortened in accordance with this instruction, is it necessary to make miscellaneous entries in the diary to reflect these changes?—T. B. G. HMC, USN.

- *In the first two instances, the tour of duty ashore for an HM3 will be two years. A PN3 will serve 15 months ashore, counted from the commencement of recruit training or school, whichever is earlier.*

The tours of duty in the above cases remain the same as outlined in BuPers Inst. 1306.20C, which precedes BuPers Inst. 1306.62. Where changes in tour dates are made by BuPers Inst. 1306.62, it will be necessary to make miscellaneous entries in the diary to reflect these changes.—Ed.

Three-Button CPO Coats

Sir: Would you tell me in what year the CPO uniform coat was changed from four to three buttons?—V. R. C., WO, USN.

- *BuPers Circular Letter 244-45 dated 17 Aug 1945 outlined the change authorizing CPOs to wear the officer-type blue service coat with three gilt buttons. There was a transition period up until 15 Oct 1948 when you could wear either the three- or four-button coat. After that, all coats were to be of the three button variety.*—Ed.

Time-in-Pay-Grade Credit

Sir: Personnel who satisfactorily passed the February 1957 competitive examinations were promoted 16 Jun 1957 rather than 16 May. Won't this keep them from meeting the "time in pay grade" requirements for the next Fleet-wide exams?—D. L. D., YN3, USN.

- *No. The possible situation you point out was recognized when the decision was made to advance these personnel on 16 June, rather than 16 May.*

The problem was solved by U.S. Naval Examining Center Advancement Letter No. 2-57. This provides that an entry be made in the records of all individuals advanced on 16 June, stating that their service in the pay grade to which advanced—for the purpose of computing multiples and determining eligibility for advancement—is considered to date from 16 May.—Ed.

Men of MinDiv 111 Like Small Boat Duty

Sirs: As a follow-up on your excellent and timely articles on mine warfare, back in February, we would like to take this opportunity to sing a little praise of our own outfit, Mine Division 111.

Attached to the Seventh Fleet, MinDiv 111 has the smallest minesweepers on active duty. Our boats consist of ten 50-foot and five 40-foot converted motor launches. Commanding these craft are chiefs, first and second class petty officers. The same high standards in seamanship, engineering, and minesweeping are expected of these boats as in the larger types.

Originally the division was established on 13 Sep 1951 as Minesweeping Boat Division One. Earlier, in 1950, the minesweepers had been operating under Commander Mine Squadron Three. Then, as now, the boats were carried by LSDs to the sweeping area.

From 30 Jun 1951 until April 1952, MSB One worked in such hot spots as Wonsan, Hungnam, Chaho, Chongjin, Songjin, and Chinnampo, Korea. The boats were under enemy fire on seven separate occasions during the last six months of 1951.

Pride in our present-day outfit grew from the deeds of those heroic minesweeping men. Recently we dedicated two chairs to the proposed Navy and Marine Corps Memorial Stadium in honor of two former shipmates who lost their lives during the Korean fighting. In trying to maintain the spirit of the original division our unit has, in two successive years, won the Force Battle Efficiency Award.—Men of MinDiv 111.

- *We like your song of praise of MinDiv 111. Let us hear from you on any other hits you might come up with in the future.*—Ed.

SMALL BUT BIG—MinDiv 111 with Seventh Fleet claims smallest sweepers on active duty but has big record from Korean combat to present day.

FHA-Military Home Loan

Sir: As a soon-to-become home owner, I have made a quick study of SecNav Inst. 1741.4 of November 1954 which outlines the FHA military home loan. Only trouble is that it doesn't go into detail concerning the status of the loan when a serviceman goes into the Fleet Reserve. Could you tell me if the insurance guarantee is canceled upon entering the Fleet Reserve, causing payments to increase, or does the loan continue at the same rate? Also, is the quoted 4½% interest rate still the same, or has it increased since this instruction was issued?—B. S., G.S.C., USN.

- *The interest rate has been increased to 5%. This information is going to be included in the revision of SecNav Inst. 1741.4 of 10 Nov 1954. Mortgage insurance premiums on loans insured by FHA are paid by the Department of the Navy during the period of ownership by the serviceman only while on active duty. Since active duty ends upon transfer to the Fleet Reserve, you must then complete and submit DD Form 803 (Certificate of Termination) and start payment of the mortgage insurance premium.*—Ed.

Ship Reunions

News of reunions of ships and organizations will be carried in this column from time to time. In planning a reunion, best results will be obtained by notifying The Editor, ALL HANDS Magazine, Room 1809, Bureau of Naval Personnel, Navy Department, Washington 25, D. C., four or more months in advance.

- *North Sea Mine Force Association*—The 16th annual reunion is scheduled for 10, 11 and 12 October at the Hotel New Yorker, New York City. For information, contact J. J. Kramer, 54 Walnut Ave., Floral Park, L. I., N. Y.
- USS *Santa Fe* (CL 60) — The 11th reunion will be held at the Piccadilly Hotel, 227 W. 45th St., New York City, on 12 October. Write to Milton Larkin, 17 George St., Saddlebrook, N. J., for information.
- USS *Saratoga* (CV 3) — The sixth annual reunion will be held at the Lafayette Hotel, Long Beach, Calif., on 26 October. For more details, write to Harold Koch, 3210 Clark Ave., Long Beach 8, Calif.
- USS *Sloat* (DE 245) — A reunion will be held on 12 October. Additional details may be obtained from T. Quinlan, 25-10 31st Ave., L. I. C. 6, N. Y.
- *Submarine Veterans of WW II*—The Third annual reunion will be held on 13, 14 and 15 September at New London, Conn. For information, write Robert A. Link, 32 W. Bolton Ave., Absecon, N. J., or Ernst T. Rosing, 1409 S. East Ave., Berwyn, Ill.
- USS *William C. Cole* (DE 641) — Crew members who served on board from the time of commissioning until December 1946 and who are interested in a reunion, contact Chester Godlewski, 925 Pleasant St., Schenectady 3, N. Y.
- USS *Swanson* (DD 443) — WW II crew members interested in holding a reunion, write to J. D. Cahill, P.O. Box 667, Mt. Pleasant, S. C.

Reenlistee Wants Old Rate

SIR: After being discharged as an AD2 in 1955, I attended college for a year and was then reenlisted in March, 1957 as an AD3. Do you know of any way that I can get back my old rating of AD2?—J. G. J., AD3, USN.

- *There is no "automatic" way of getting your old rating back. Of course you will be eligible, in so far as time-in-service requirements are concerned, to take part in the February 1958 examinations. If you do take the exam, and pass, chances are you will be advanced to AD2.*—ED.

Paricutin *Still Going Strong*

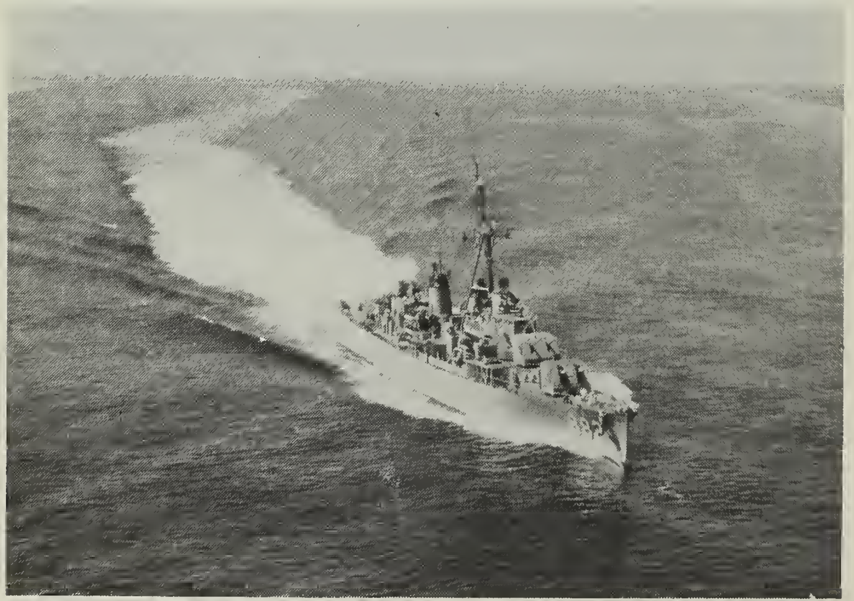
SIR: I am very disappointed to find that nothing has been said about USS *Paricutin* (AE 18) in ALL HANDS magazine. Will you print a history of the ship for me?—C. H., EM1, USNR.

- *Possibly you were on leave when the July 1955 issue of* ALL HANDS *came out. In that issue, in the article, "Power Packing AEs Deliver Hot Goods," mention was made of* Paricutin *several times. Since there isn't room to print the full history of the ship, here's a brief rundown.*

She was commissioned 3 Mar 1945 as a cargo ship, then converted and recommissioned 25 Jul 1945 as an ammunition ship. After a tour during which she transferred excess ammunition from the forward areas of the Pacific to Bangor, Wash., and Port Chicago, Calif., she was ordered mothballed 20 Nov 1947.

Brought out during the Korean conflict, Paricutin *made two voyages to the Far East before the truce was signed. During these tours she operated with a replenishment group off both coasts of Korea, rearming the carrier task forces, surface bombardment and blockading forces, and shore-based Marine air groups.*

She also made runs, under fire from enemy shore batteries, into Wonsan Harbor to supply shells to ships on the line which were participating in the longest ship-to-shore bombardment in naval history.—ED.


SMOOTH SAILING—*USS Furse* (DDR 882) cuts wake through quiet seas as her radar screens keep sharp lookout while on patrol during Fleet exercises.

Selection for LDO

SIR: It was my understanding that only those people whose names were listed in BuPers Inst. 1120 of 16 Oct 1956 would be considered for appointment to Ensign under the LDO program by the selection board which met in February. I have checked some of the names in the instruction against the names of those who were selected for appointment and find that some of those selected were not listed in the instruction. Could you give me a how-come?—C. F. H., ETC, USN.

- *Alnav 4-57, which announced the LDO (Temporary) Program, also mentioned that those to be considered for those new appointments would be* ALL *who applied and not just those listed in BuPers Notice 1120. Selection thereafter was based on relative merits, not primarily on the score attained on the test.*—ED.

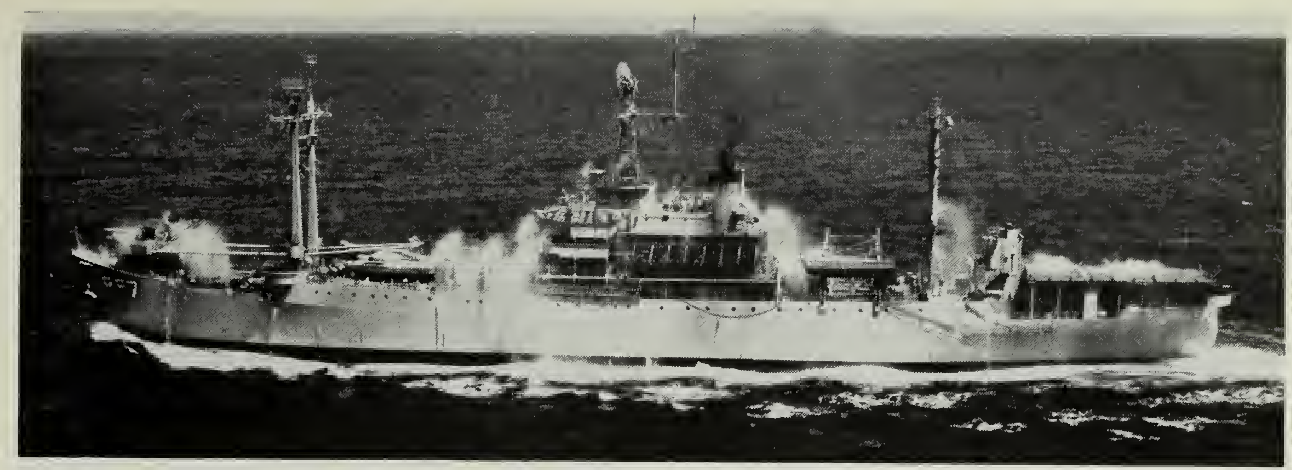
One Day Between Enlistments

SIR: Here's a case for you concerning the Good Conduct Medal. A man enlists in the Regular Navy on 1 Nov 1950, is discharged on 13 Jun 1955 and enlists in the Naval Reserve on 14 Jun 1955. He is then recalled to active duty in the TAR program on 15 Jun 1955.

Does the one day of inactive duty cost him his entitlement to the second award of the Good Conduct Medal for service ending on 31 Oct 1956?—T. E. O., YN2, USN.

- *No. The man in your case became eligible for his second medal on 1 Nov 1956. He had one day of inactive duty which must be made up before he is considered to have completed three years' continuous active duty. But, his service is not considered "broken," even though the one day does not count as active duty time.*

Anyone who reenlists within 90 days after he is discharged is considered to have served on continuous duty.—ED.



ATOMIC WASHDOWN is given to *USS Mount McKinley* (AGC 7). Crew made 4.0 conduct record while cruising Med.

Shorvey Preferences

SIR: I am a GMC with 20 years' service and am currently on Fleet Shore Duty. When I fill out my Shorvey Rotation Data Card can I indicate an overseas shore duty as my first, second and third preferences of duty or must I limit my preferences similar to those shown in the illustration on page 34 of the Jan '57 issue of ALL HANDS?

According to that illustration, the first three choices indicated were for ships and the fourth was for overseas shore duty. Is that the only choices an individual gets?—F.E.P., GMC, USN.

- *Chief, we are happy to see that you take the time to read the fine print. Our reply to your question, however, is not too favorable as the examples we used to show how to fill out a Shorvey Rotation Data Card were drawn up in strict accordance with the Shorvey/Seavey Instructions (BuPers Inst. 1306.21B and 1306.62). When you fill out your Shorvey data card, your first, second and third choices must indicate the types of ships you prefer as your next duty, similar to those shown on the example on page 34 of the Jan '57 issue of* ALL HANDS.

Personnel are not normally assigned to overseas billets direct from shore duty. However, if your commanding officer considers that there is sufficient justification, you may indicate your desires in the remarks column of the data card. Good luck!—ED.

Stack Stripes

SIR: How many old-timers wrote in to say that the battleship, page 47, June ALL HANDS, is not the USS *Virginia*? *Virginia* had three stacks. The reason I know is because I served in "Virgie" in 1913-14. A little background you might be able to use somewhere would include the fact that in the Atlantic Fleet over 40 years ago, stripes on the forward stack indicated the division in the Fleet. Three stripes (or bands) indicated the Third Division. Bands on the next stack indicated the ship's position in the division — two bands in the case of *Virginia;* one band was the flagship—USS *Rhode Island,* etc.—F. G. D., USN (Ret.)

- *You were the first to notice. Frankly, photographs of* USS Virginia *and* USS Massachusetts *were inadvertently interchanged during the process of makeup. Many thanks for the background on stack stripes. It led us to do a little research, and we dug up this item from the 1912 edition of* General Instructions for Painting and Cementing Vessels of the U. S. Navy, *under the heading Smoke Stack & Designation Bands. "A black band (smoke band) 14 inches in width shall be painted around the top of the smoke stacks of all slate-colored and white vessels.*

"At the commissioning, such vessels as require it, shall have painted additional black stripes 14 inches in width, located 14 inches below the 'smoke band,' and 14 inches apart, in number as may be required to distinguish the vessels by and in Divisions."—ED.

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SERVICESCOPE

Brief news items about other branches of the armed services.

★ ★ ★

An endurance and altitude record has been claimed for the new high-altitude version of the *Firebee* jet drone target missile.

Launched at Holloman Air Development Center, Alamogordo, N. M., an XQ-2B experimental *Firebee* soared to 53,000 feet and remained in the air on remote control for one hour and 44 and one-half minutes before it was recovered by its own parachute release system which safely lowered it to the desert floor.

The operation was believed to have set world's records in altitude and duration for drone missiles specifically designed as targets.

A unique feature of the flight, controlled by a new autopilot, was remote control of a seven-and-one-half-minute powerless glide which followed 97 minutes of powered flight. After fuel is expended in the XQ-2B, it can be glided under control before parachute release.

Recently, another *Firebee* established a record for remote-controlled flight by flying 152 miles out from the control station and back—or a round-trip total of 312 miles.

★ ★ ★

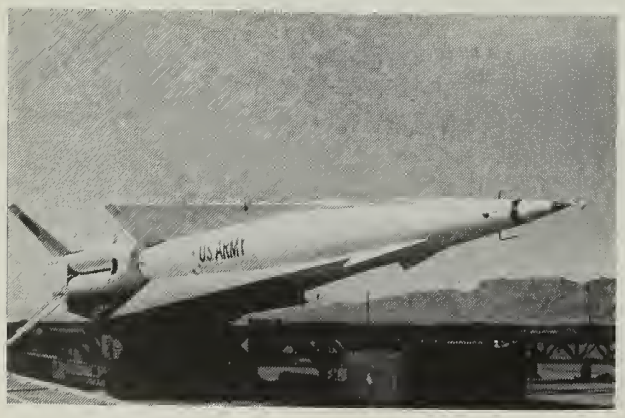
A jeep-mounted detector which automatically stops the vehicle when it locates a land mine has been developed by the Army Engineer Corps.

Capable of finding mines buried in and along roadways, the detector covers a path six feet wide directly in front of the jeep and can be moved to both sides of the vehicle with ease. Operating controls, located on the dashboard of the jeep, can be manipulated by either the driver or his assistant.

The search coil, protected by an immersion-proof rubber-coated plywood box, is kept at a constant height above the ground by three skid-caster type wheels which support its carriage assembly.

When the search coil passes over a mine, the vehicle is stopped instantly by the brake actuator, which disengages the clutch and sets the brakes.

A meter, mounted on the indicator panel indicates the presence of the mine. A system of lights, also located on the panel, changes from green to red and a signal is received through earphones by the driver.



BIG DEFENDER—*Nike-Hercules,* new Army surface-to-air missile is designed to intercept, destroy enemy aircraft.

'COOL' PARTNERS USCGC *Northwind* (WAGB-282) breaks ice in Antarctica as Navy copter spots from above.

A photographic machine that controls individual development of each negative on a long roll of film is now ready for use by the Air Force.

The machine examines each negative on a 200- to 400-foot roll of aerial film, individually judges the amount of development it requires, and develops it to get maximum aerial reconnaissance data. Before the use of this new photo processor, a roll of negatives was developed as a compromise to get as much information as possible from the entire roll. This resulted in some negatives of poor quality and the frequent loss of important reconnaissance data.

The new processor is sealed and can operate in daylight. An exposed roll of film, taken from the reconnaissance airplane after a mission, is loaded into the unit and threaded over rollers which guide it through the development process at five feet per minute. It can develop six negatives per minute, or up to 3000 per day.

Twenty-four feet long and six feet high, the processor is a prototype for smaller machines. It can be disassembled and transported by air to advanced Air Force reconnaissance bases.

★ ★ ★

Protection against small arms fire and shell fragments may be afforded tractor operators in forward combat areas through use of an armored kit developed by the Army Engineer Corps at Fort Belvoir, Va.

The kit, which can be mounted in the field by maintenance personnel, has been specifically designed for use on standard D-7 and D-8 tractors. Both the engine and operator are protected by armor plate.

Visibility for the operator is provided through standard Army Ordnance laminated glass vision blocks. Three vision blocks are provided for the front, one in each door, and one in the rear.

While designed primarily for protection of the operator and tractor in wartime in clearing obstacles and road blocks usually covered by small-arms fire, the armor kit is also being considered for such uses as ammunition dump or oil well fire-fighting and other hazardous work where the operator's life would be endangered.

THE PRINCIPLES OF the housewife's lazy Susan and the farmer's plow have been combined to develop a new mechanical mine planter for the Army.

The new machine, which greatly reduces the time it takes to lay an anti-tank minefield, carries its payload in a revolving magazine based on the same idea as the one behind the lazy Susan, a revolving tray often used for such items as pickles, candies or condiments at the dinner table. During operation, the magazine automatically feeds mines into a planting mechanism which arms them and drops them into a furrow dug by the machine's large side-elevating plow. Then, after the mine is in the ground, the plow lets the soil drop back into place to conceal the deadly "crop" of underground explosives.

The planter is mounted on pneumatic tires and can be pulled by any large crawler tractor while sowing mines. For transport purposes it can be towed by a standard military truck at regular highway speeds.

The machine plants mines at a predetermined rate, and since the whole business may be run by the tractor operator alone, it means a considerable saving in man-hours. It also eliminates the old-fashioned task of manually digging individual holes for each mine emplacement.

★ ★ ★

AN ALTITUDE OF 198,770 feet—nearly 38 miles—has been reached by an Air Force officer in an aero-medical altitude chamber test.

It is the highest simulated altitude ever reached by man. The record altitude was achieved while testing new equipment.

The chamber's simulated altitude rose quickly to 120,000 feet and then more slowly to the peak of 198,770 feet.

Earlier attempts to reach 200,000 feet have been made, but each time breathing counteracted the near vacuum at full power, so it was impossible to raise the simulated altitude beyond 155,000 feet.

For this latest test, a hose was run from the officer's helmet exhaust valve into an adjoining chamber, where the air he breathed out was dissipated. With this arrangement the chamber's gauge was brought down to 0.250 millimeters (an atmosphere of only 0.0048 pounds per square inch) before evaporation of his perspiration halted the chamber's ascent.

POINTED UP—Bottom view of USAF B-58 *'Hustler'*, supersonic bomber, shows detachable tank on fuselage.

★ ★ ★

A VERSATILE NEW GUIDED MISSILE, designed primarily to combat low-flying enemy planes, has been added to the Army's air defense arsenal.

Designated the *Hawk*, the new weapon carries a lethal, modern warhead and is capable of destroying attacking planes at even the lowest altitudes. It will complement the defense against high-altitude aircraft provided by the Army's *Nike* system.

The *Hawk* can be launched either from fixed installations, such as those in the United States air defense complex, or in the field by fast-moving combat troops. On the ground the *Hawk* system can be carried by a minimum of vehicles, and in the air it can be transported by either helicopters or conventional planes.

The new missile, propelled by a solid fuel, is about 16 feet long and 14 inches in diameter. Its guidance system employs radars of unique design, which are highly effective in detecting and tracking planes that would be in the blind zone of conventional radars.

SIGNAL CORPS' new all-weather radar 'eye' can spot one man half a mile away in darkness or fog.

REAL GOIN' POWER—Army has nuclear power plants, transportable by air, for installation at remote bases.

Are You in Segment III?

IT'S SEAVEY TIME

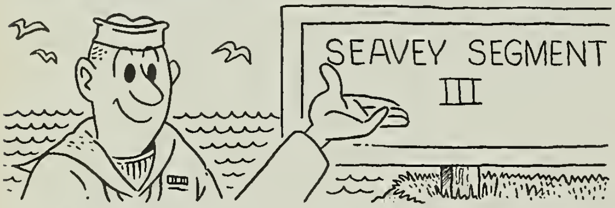
THE FIRST PART of the three-part SEAVEY—the new system under which eligible enlisted personnel serving at sea will be transferred to shore duty—goes into operation on 1 Oct 1957.

This first part of the system to be placed in effect is called "Seavey Segment 3." It will affect the following ratings: AD, OA, AB, AM, PR, AG, GF, AQ, AK, PH, AE, AT, AL, HM and DT. The ratings include designated strikers of pay grade E3, also HN and DN.

The second part of the Seavey—titled "Seavey Segment 1"—will be placed in operation in February 1958. It will affect the following ratings: BM, QM, SM, RD, SO, TM, GM, FT, FC, MN, ET, IM, OM, RM, TE, YN, PN, SK, DK, JO, LI/PI, DM, and GS.

The third and final part of the Seavey—called "Seavey Segment 2" will be placed in operation in June 1958. This part will include the ratings of CS, SH, MM, EN, MR, BR, BT, EM, IC, ME, FP, DC, PM, ML, SV, CE, CD, CM, BU, SW, UT, SD, and TN.

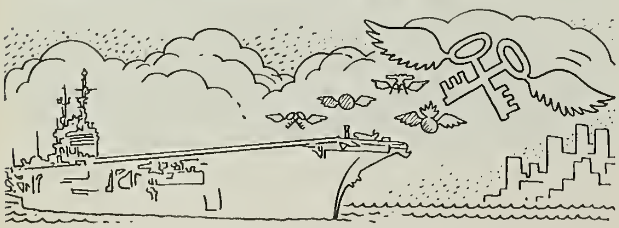
The October launching of the first part of the Seavey comes after many months of preparation. Last May the Chief of Naval Personnel asked each Fleet to survey all those ratings in Seavey Segment 3 and determine how long each man in those ratings had been serving at sea, and how much obligated service he had remaining. After this huge volume of statistical information was studied in the Bureau, a sea tour date for the 1957 increment of Seavey Segment 3 was established for each rating. These dates were announced by BuPers Notice 1306 of 14 May 1957.

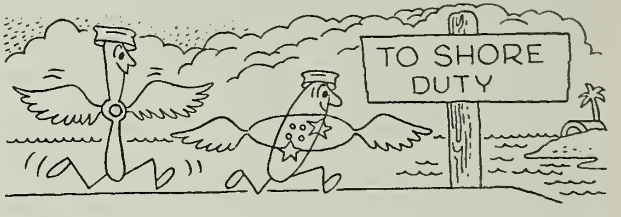


If your rate is one of those included in Seavey Segment 3 you can check the sea duty dates for your rate on the chart on pages 32-33 and find out if you are included in Seavey Segment 3. If you meet the *sea duty requirements* as shown on the chart *it means that you are going to be ordered to shore duty some time between 1 Oct 1957 and 1 Oct 1958.*

When your Rotation Data Card arrived on board, you were called down to your personnel office to list your shore or overseas shore duty preferences, and other information. Your completed rotation data card was used as the basis for information that goes on your Seavey cards.

These Seavey cards are being assembled in the Bureau of Naval Personnel to form Seavey Segment 3. Billets ashore for men holding rates included in this Segment will be filled entirely during the 12-month period starting 1 October from names carried in Seavey Segment 3, whether such billets are classed as Fleet Shore Duty, BuPers Shore Duty, Recruiting Duty or Instructor Duty, as well as all choice overseas shore duty billets. *The only way* a man holding one of the rates in Seavey Segment 3 can get to shore duty after October 1957 is by means of the Seavey (except where assigned shore duty for humanitarian or hardship reasons).





However, if your name is included in Seavey Segment 3 you MUST have at least 12 months' obligated service *at the time* it is decided to transfer you to shore duty (24 months' obligated service is required if you are being transferred to overseas shore duty). It may be decided to issue your orders at any time between 1 Oct 1957 and 1 Oct 1958 as the billets become vacant.

What happens if you have less than 12 months' obligated service when Seavey Segment 3 goes into effect on 1 Oct 1957? Your name goes directly into the "inactive" file of the Seavey.

If, at any time while your name is being carried on the Seavey, your obligated service drops to less than 12 months, your name is automatically shifted from the "active" to the "inactive" files of the Seavey. *You will not be issued orders to shore duty while your name is carried in the "inactive" Seavey files.*

To get your name removed from the "inactive" and returned to the "active" file of the Seavey you must extend your enlistment or reenlist, or sign an official agreement to do so, in order to raise your obligated service to 12 months or more. (This agreement can specify it will become effective *only* if you are ordered to shore duty within the 12-month period of the Seavey.) When you sign such an agreement a report is made immediately to the Bureau where your name is shifted from the "inactive" to the "active" Seavey file. You will then be considered for your duty preference along with other men of your rate, and can expect to be ordered ashore within the 12-month period of that Seavey Segment.

To be absolutely certain that you will go ashore when your name appears on Seavey Segment 3, be sure you have obligated service through December 1959. Then, no matter what month between October '57 and October '58 you are ordered ashore you will have sufficient obligated service.

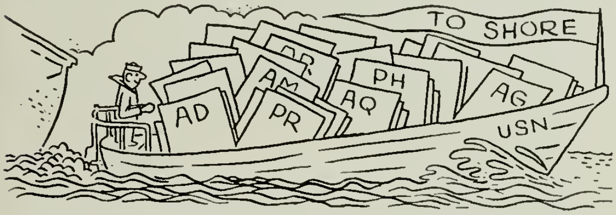
As a result of Seavey Segment 3, the length of the shore tours of personnel in certain rates *now* serving ashore are being extended six months. (For further details, and to find out if you are affected, see chart on pages 32-33.)

Once you have been transferred to shore duty, the length of your stay will depend on the amount of obligated service you have.

If you have sufficient obligated service to cover the full length of your tour ashore, you have no problem. You will remain ashore for the full tour.

If you do not have enough obligated service to cover your full tour ashore you may, seven months before your enlistment expires, sign an agreement to extend your enlistment and thus obtain the necessary obligated service. If you sign this agreement, you will remain ashore for your full tour. If you do not sign it, you will remain ashore until your enlistment expires, at which time you may reenlist (if eligible) or be discharged.

If you lack enough obligated service to complete your tour ashore and if, seven months before your enlistment expires, you do not sign an agreement to extend, the Bureau will start the wheels rolling to get a relief ordered for you. Then, if you later change your mind and extend or reenlist, you will be made available on the date your old enlistment expires, for assignment to sea duty under the provisions of the Seavey. You cannot remain ashore and finish your full tour because your relief is already on his way to take over your billet.



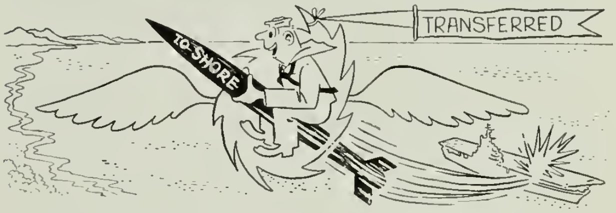
QUESTIONS AND ANSWERS

WITH THE ESTABLISHMENT of the new Seavey-Shorvey rotation program, it's natural that questions will crop up concerning various aspects of the plan as they apply to you. Many of your questions will have been already answered in the comprehensive 22-page report on Seavey-Shorvey that appeared in the January 1957 issue of ALL HANDS, while the answers to still other questions will be found in this issue as they apply to Segment 3. If you can't find the answers in these two issues, send in your questions to ALL HANDS and we'll do our best to get you the answers pronto.

Here are some of the questions received to date.

Q. Does the use of data processing machines in enlisted distribution mean that my new duty station will be determined by a machine?

A. Absolutely not. The machines will never make decisions about you. They are merely tools for distribution officers. Trained personnel officers act on the information which *you* make available to them. The data processing machines help you because they permit more information about you and your desires to be placed before the distribution officer in a better form. Now he can spend more time considering you instead of shuffling papers. The machines also permit better personnel planning which is to your benefit. Now you are less likely to be transferred on short notice. Additionally, the machines transmit information faster. This means that you get the word sooner.



Q. If I am sent to a class "B" school from sea duty and do not successfully complete the course through no fault of my own, must I requalify for the sea duty requirement of the Seavey?

A. If you attend a naval school from sea duty and are returned to sea duty after successful completion of the course of instruction, your commencement of sea tour date remains unchanged. However, if you had not successfully completed the course and were ashore at school over six months, your commencement of sea tour date would be changed to the date you returned to sea duty, and you would have to requalify for the Seavey. If you stand to lose your previous sea duty and your non-graduation was through no fault of your own, it is recommended that you send a request for a waiver to the Chief of Naval Personnel (Attn: Pers B21). This request should be sent via your commanding officer and the naval school, for determination of the reason for your failure. Such waivers may be requested in cases of hospitalization and humanitarian shore duty. Each case will be judged on its own merits.

Q. How can I change my duty preferences or provide additional information for my Seavey or Shorvey data cards on file in the Bureau of Naval Personnel?

A. Send a letter to the Chief of Naval Personnel (Attn: Pers B21s) via your commanding officer, with the new information. Your cards will be changed if action has not already been taken on your new assignment.

Q. If I sign an agreement to extend my enlistment for shore duty, may I be assigned to an area ashore other than one of my preference?

A. Every effort will be made to assign you to the area of your preference. However, should you be assigned to an area other than your preference if the service needs require it, your agreement to extend is still effective as the only guarantee is shore duty.

Q. When is the old "Shore Duty Eligibility List" canceled for each rate?

A. The provisions of BuPers Inst. 1306.20C, by which personnel requested shore duty, are canceled on 1 Oct 1957 for rates in Segment 3, on 1 Feb 1958 for rates in Segment 1, and on 1 Jun 1958 for rates in Segment 2. After these dates, only personnel on the Seavey will be ordered to shore duty and receive first choice for overseas shore billets.

Q. If I am on the Seavey and do not have a minimum of one year's obligated service for shore duty or two years' obligated service for overseas shore duty, what happens when I reenlist?

A. If you reenlist on board, your PAMI will notify the Bureau of Naval Personnel of your new EAOS. This will transfer your cards from the "inactive" Seavey to the "active" Seavey and you become eligible for consideration for the areas of your preference.

If you are transferred to a receiving station or are separated on board, but do not reenlist within 24 hours, you are dropped from the Seavey. Should you reenlist, under such circumstances, on continuous service, you will be reassigned to sea duty in accordance with the needs of the service. As your continuous sea tour has not been broken, you will be reported on the next Seavey segment for your rate. If you reenlist on broken service, your continuous sea service has been terminated. Therefore, you must requalify for assignment to shore duty.

Inactive service must be recorded in your career history.

Q. I am in Segment 3. If I do not have one year's obligated service on 1 Jan 1958, is it to my advantage to agree to extend my enlistment in order to have sufficient obligated service to go ashore under the first Seavey?

A. If you have a relatively long record of naval service for your rate and have had your share of the more arduous duty, it is to your advantage to agree to extend. The reason is this: If you are high on the priority list, you will have first choice at the areas you prefer. If you wait too long and are transferred from the "inactive" to "active" Seavey late in the Seavey period, the vacancies in the area you desire may be all filled and you will have to be assigned to another area.

Q. May a man request assignment to overseas shore duty if currently serving on that type of duty?

A. No.

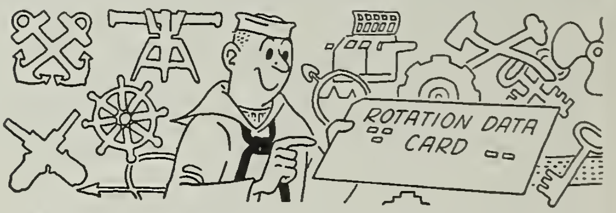
Q. May a man on duty afloat list overseas duty preferences in BOTH ocean areas?

A. No. He may request overseas service in either ocean, but all choices for overseas service are then limited to the one ocean. This does not affect ability to choose overseas service in Atlantic and shore duty along the Pacific Coast if he so desires.

Q. If I am on overseas shore duty and on the Seavey, when will I be ordered to shore duty in the continental U. S.?

A. Normally, you can expect orders about three months before your overseas shore duty tour expires. These orders will be executed during the month your tour expires.

Q. My service record does not record all my duty stations back 10 years. What entry should be made?



A. Your certified statement of service will be entered in the record and used as a basis to report your career history as required.

Q. Should my present duty station be recorded in career history?

A. Yes. The first duty station in your career history should be your present duty station.

Q. Should temporary additional duty be recorded in my career history?

A. Yes, if length of time on temporary additional duty is one month or longer or was at a Class "A," "P," "B," "C," or functional school for any period of time.

Q. How do I indicate a location and type of duty in my career history if there is no code?

A. Use the closest location and type of duty for which a code is assigned. If there is no code reasonably similar, use code "NOC."

Q. Can a number of codes be combined to specify exactly a career history entry?

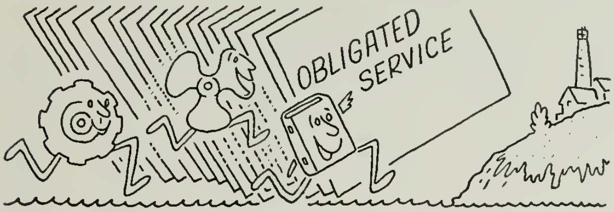
A. An entry of career history may have either five or six positions, no more. Two positions to indicate the number of months. One position to indicate the home port is sea duty or the type of duty if shore or overseas shore, and not more than three positions to indicate ship type, city or area code.

Q. How do I indicate a type of duty or location in my duty preferences if there is no such code in BuPers Inst. 1306.58B?

A. First, be sure a duty station exists—codes have been provided for the major locations. If you are sure there is an allowance for your rate at the activity and there is no code, use the code for the closest location. Be sure the code you use is in the same geographical area. For example, if the location you want is in the 5th Naval District, whether it's Fleet shore duty or other shore duty, use a code for the nearest activity in the 5th Naval District. Then indicate the exact location you want in the remarks space (Block 15) of your rotation data card in plain language.

Q. A man is on sea duty, falls within the Seavey *zone and receives a rotation data card. Card is submitted. Subsequent to submission of card, the activity is changed to shore duty instead of sea duty. What happens to the man?*

A. The man will receive orders to shore duty under the Seavey. However, if this same man had not received a rotation data card before the official change of designation of that duty from sea to shore, his shore duty would commence on the date the unit is reclassified.



Q. I was on duty at one shore station. During my tour I was hospitalized for three months. Upon release I was assigned to another shore station. Does my initial shore completion date change?

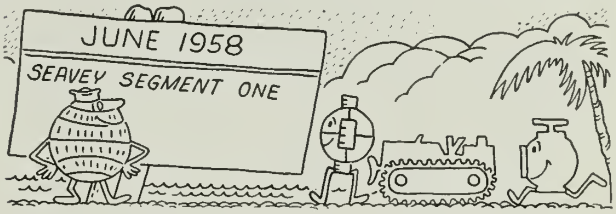
A. No. You retain your original completion date established when you reported to your first shore duty.

Q. What command determines my new sea duty station under the Shorvey?

A. Except for input into Bureau-controlled billets and ratings under Bureau control, the commands in the Fleets determine your new duty station. The Chief of Naval Personnel makes people who are to be assigned in the Pacific Fleet available to the Commanding Officer, Enlisted Personnel Distribution Office, U.S. Pacific Fleet in San Diego. The ultimate duty stations are determined in that office. In the Atlantic Fleet, personnel are made available to Commander Service Force, U.S. Atlantic Fleet. These availabilities may then be passed on to a major type commander for determination of the ultimate duty station.

Q. Will the Chief of Naval Personnel control the assignment of my new duty station under the Seavey?

A. The Chief of Naval Personnel controls the assignment of ultimate duty stations only in the case of personnel ordered to duty in a Bureau-controlled billet ("B" or "I" billet), and of personnel in ratings under the direct control of the Chief of Naval Personnel, such as AC, CT, MA, MU, and TD. The rate of AGC and some special program codes are also directly controlled by the Chief of Naval Personnel. In other cases, the Chief of Naval Personnel makes the man available to a Fleet Commander, District Commandant, or the Chief of Naval Air Training for assignment within geographical boundries of a specific naval district. These latter commands determine the ultimate duty assignments.



In the case of overseas shore duty, personnel requesting such duty normally will be nominated to one or the other Fleet comanders for assignment overseas. If a billet does not exist in one of the overseas areas of their choice, they are assigned to continental shore duty. The Fleet commanders will determine the ultimate duty stations overseas except in certain Bureau-controlled billets. All overseas duty choices must lie in the same ocean area, either Pac or Lant. Also, the assignment to overseas shore duty from the SEAVEY is limited to an area of preference unless "anywhere overseas" is selected.

WIVES AND DAUGHTERS of NAS Barber's Point Navymen present unusual welcome to shore bound carriermen.

SEA TO SHORE SURVEY
"SEAVEY"

SEGMENT (SECTION) 3 OF SEAVEY—

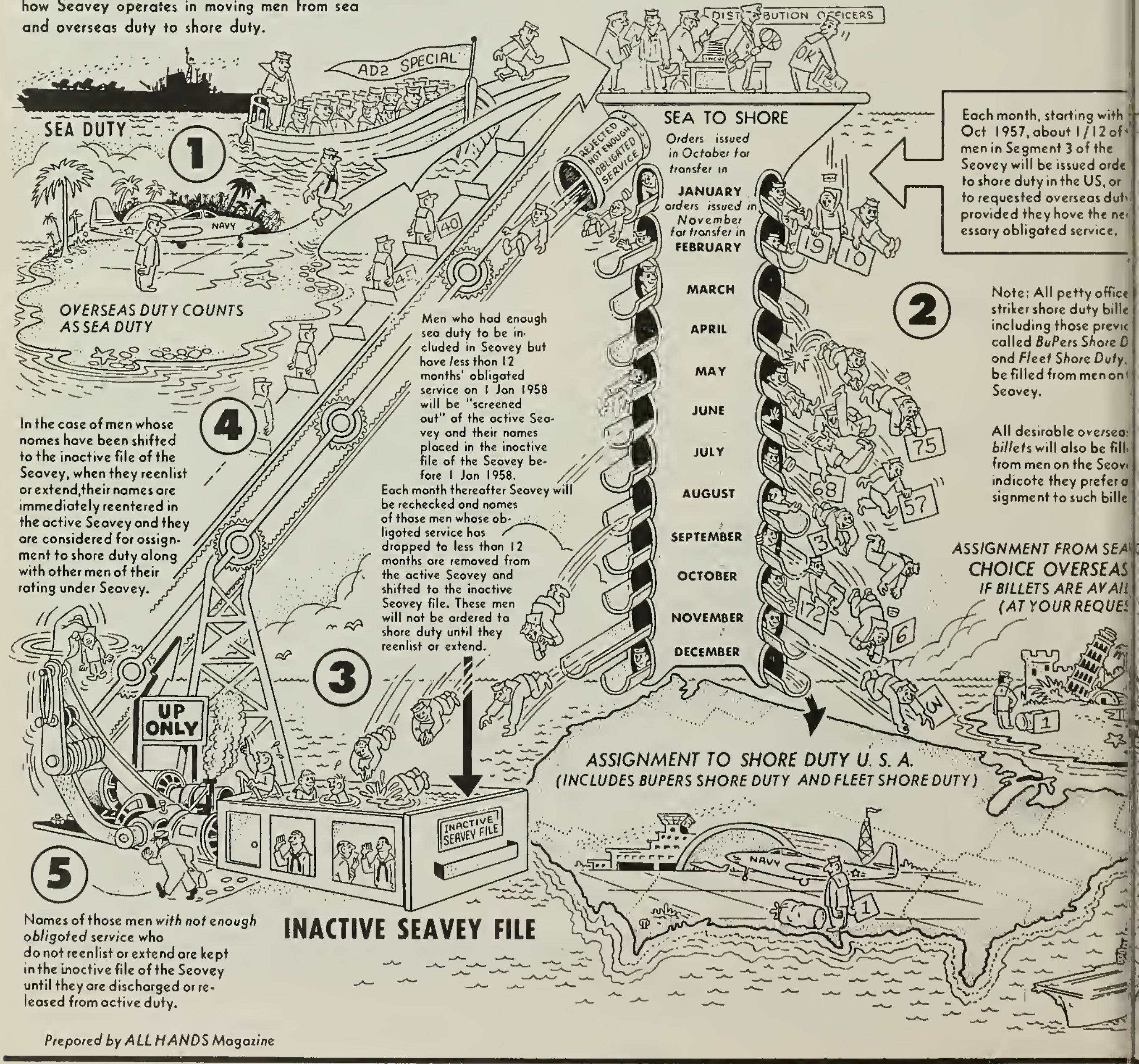
FOR MEN HOLDING THE FOLLOWING RATES – WHO HAVE BEEN AT SEA
IN THE SEGMENT 3 SECTION OF THE SEAVEY AND YOU WILL BE ORDER
OCT 1958. THIS MEANS TRANSFERS WILL BE EFFECTED BETWEEN

YOU'RE IN—IF IN RATE BELOW AND ON SEA DUTY SINCE DECEMBER 1955

ABC ABI AB2 AB3 ABAN	AMC AMI AM2 AM3 AMAN	PRC PRI PR2 PR3 PRAN	GFC GFI GF2 GF3 GFAN	AGI AG2 AG3 AGAN	ADC	AOC	AQC AQI AQ2 AQ3 AQAN	AKC AKI AK2 AK3 AKAN	PHC PHI PH2 PH3 PHAN	HMC HMI HM2 HM3 HN

EXAMPLE OF OPERATION OF SEAVEY SEA-TO-SHORE TRANSFER BY SEGMENT (SECTI

This illustration shows, using the AD2 Rate as an example, how Seavey operates in moving men from sea and overseas duty to shore duty.



Each month, starting with Oct 1957, about 1/12 of men in Segment 3 of the Seavey will be issued orde to shore duty in the US, or to requested overseas dut provided they have the ne essary obligated service.

Note: All petty office striker shore duty bille including those previc called *BuPers Shore D* and *Fleet Shore Duty*. be filled from men on Seavey.

All desirable *oversea billets* will also be fill from men on the Seav indicate they prefer a signment to such bille

Men who had enough sea duty to be included in Seavey but have *less* than 12 months' obligated service on 1 Jan 1958 will be "screened out" of the active Seavey and their names placed in the inactive file of the Seavey before 1 Jan 1958.

Each month thereafter Seavey will be rechecked and names of those men whose obligated service has dropped to less than 12 months are removed from the active Seavey and shifted to the inactive Seavey file. These men will not be ordered to shore duty until they reenlist or extend.

In the case of men whose names have been shifted to the inactive file of the Seavey, when they reenlist or extend, their names are immediately reentered in the active Seavey and they are considered for assignment to shore duty along with other men of their rating under Seavey.

Names of those men *with not enough obligated service* who do not reenlist or extend are kept in the inactive file of the Seavey until they are discharged or released from active duty.

INACTIVE SEAVEY FILE

Prepared by ALL HANDS Magazine

A-TO-SHORE TRANSFER—GETS UNDERWAY

VERSEAS SINCE DATES INDICATED BELOW (OR EARLIER): YOUR NAME WILL APPEAR
HORE (IF YOU MEET OBLIGATED SERVICE REQUIREMENTS) BETWEEN OCT 1957 AND
958 AND JAN 1959 BECAUSE OF THE 3 MONTHS' LEAD TIME PROVIDED

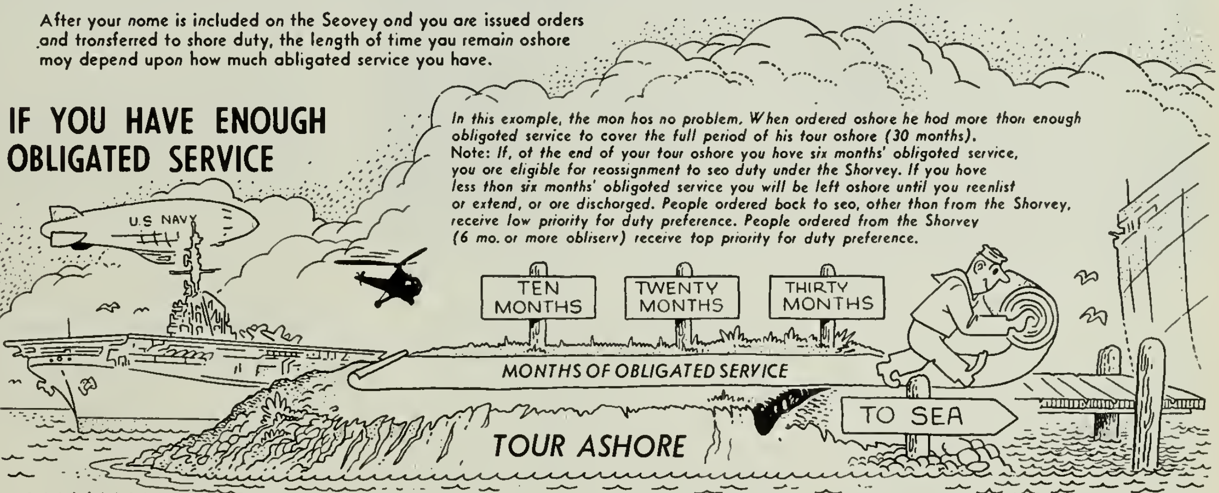
SINCE NOVEMBER 1955		SINCE SEPTEMBER 1955		SINCE FEBRUARY 1955
AD1	AEC	ATC	ALC	AO1
AD2	AE1	AT1	AL1	AO2
AD3	AE2	AT2	AL2	AO3
ADAN	AE3	AT3	AL3	AOAN
	AEAN	ATAN	ALAN	

> "While the expanding machine installations coupled with more rapid processing and transmission of data is serving to improve the efficiency and effectiveness of the Navy's distribution system, it is to be emphasized that no machine is or will be making a decision in the Navy concerning the assignment of any man. These machine tools are merely to assist the processing of data essential to the distributor for the personal decision which he alone can make."
>
> VADM HOLLOWAY

HOW YOUR COMING TOUR OF SHORE DUTY MAY BE AFFECTED BY THE AMOUNT OF OBLIGATED SERVICE YOU HAVE

After your name is included on the Seavey and you are issued orders and transferred to shore duty, the length of time you remain ashore may depend upon how much obligated service you have.

IF YOU HAVE ENOUGH OBLIGATED SERVICE

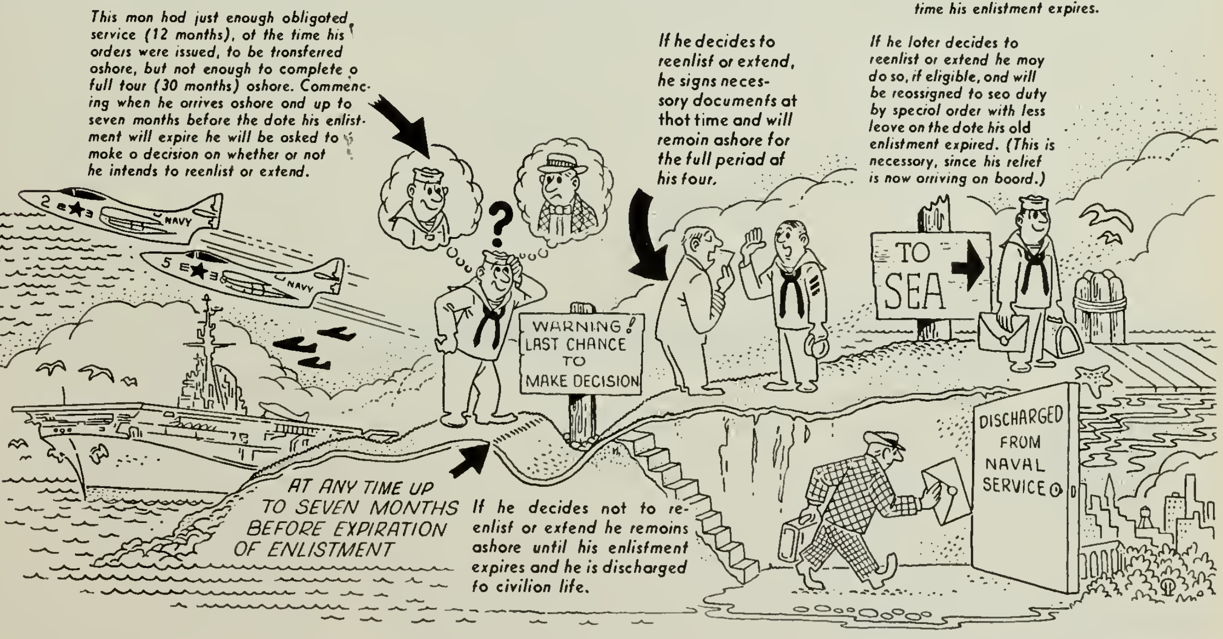


In this example, the man has no problem. When ordered ashore he had more than enough obligated service to cover the full period of his tour ashore (30 months). Note: If, at the end of your tour ashore you have six months' obligated service, you are eligible for reassignment to sea duty under the Shorvey. If you have less than six months' obligated service you will be left ashore until you reenlist or extend, or are discharged. People ordered back to sea, other than from the Shorvey, receive low priority for duty preference. People ordered from the Shorvey (6 mo. or more obliserv) receive top priority for duty preference.

IF YOUR OBLIGATED SERVICE IS ENOUGH TO COME ASHORE BUT NOT ENOUGH TO COVER A FULL TOUR ASHORE

This man had just enough obligated service (12 months), at the time his orders were issued, to be transferred ashore, but not enough to complete a full tour (30 months) ashore. Commencing when he arrives ashore and up to seven months before the date his enlistment will expire he will be asked to make a decision on whether or not he intends to reenlist or extend.

If he cannot make up his mind at the 7-month decision point, machinery is set in motion to order a relief to arrive by the time his enlistment expires.



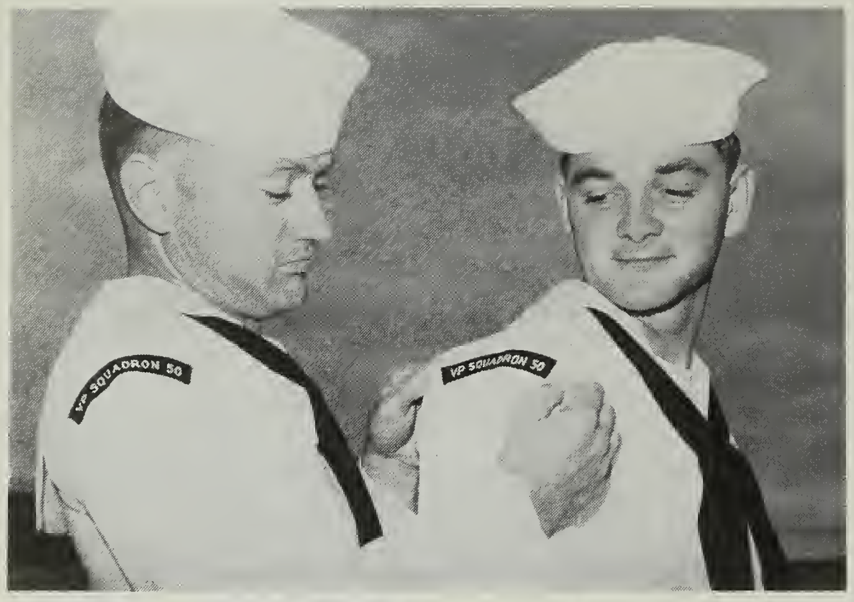
If he decides to reenlist or extend, he signs necessary documents at that time and will remain ashore for the full period of his tour.

If he later decides to reenlist or extend he may do so, if eligible, and will be reassigned to sea duty by special order with less leave on the date his old enlistment expired. (This is necessary, since his relief is now arriving on board.)

If he decides not to reenlist or extend he remains ashore until his enlistment expires and he is discharged to civilian life.

NAVY
NAVY
?
WARNING! LAST CHANCE TO MAKE DECISION
TO SEA
DISCHARGED FROM NAVAL SERVICE
AT ANY TIME UP TO SEVEN MONTHS BEFORE EXPIRATION OF ENLISTMENT

TODAY'S NAVY



PATCH FOR air squadrons approved but will not be available to all squadrons until 1958 owing to possible change in method of abbreviating names.

Eating Out of the Deep Freeze

The title of unsung heroes of Operation Deep Freeze II has fallen to the cooks who have been fighting a battle against limitations of supplies to win a victory with food.

Well into the second half of the wintering-over period the supply of foodstuffs has dwindled and the choice items have long been gone. Working without fresh foods and even many of the frozen items which are normally considered essential, the Antarctic cooks have been called upon to show ingenuity and imagination. Their efforts have provided variations and improvisations that have kept the menus free of repetition.

The start of the second half of the "longest night of the year" was marked by celebrations at all five of the U.S.-IGY scientific stations. At the South Pole, which is experiencing six full months of darkness, the staff greeted spring with a special dinner and a double feature movie while Knox Coast, Cape Adore, Marie Byrd Land and Weddell Sea Station staffs celebrated the "down hill" period with much ado.

New Job for Parachutes

Parachutes, long important to the aviator, will soon be playing an important role for the surface sailor—charting the direction of ocean currents. Some 50 parachutes are being made available to the Japanese Hydrographic Center in Tokyo for use in their current charting project.

The first 24 chutes were delivered to the Japanese hydrographic agency by U.S. Fleet Activities Headquarters, Yokosuka, Japan, early this summer.

Several oceanographic agencies use parachutes for ocean current studies in the upper 1000 feet of water. The parachutes, which are over age and have been surveyed, are lowered to a predetermined depth where they are opened. The large span of silk is easily moved by the ocean current at that level but is not affected by the wind.

The course is indicated by a small surface float attached to the parachute by a thin wire. The parachute is kept at the desired depth by a weight suspended below the canopy.

Outfit With a Drag

The pilots and crews of Utility Squadron Five (VU-5) can tell you what it's like to be shot at for a living. They tow the targets for aerial and shipboard gunnery practice in the Far East.

The squadron, based at Naval Air Station, Atsugi, Japan, services Marine and Carrier Air Groups and surface units. VU-5 has also trained personnel of the British Royal Navy and the Republic of Korea Navy in target-towing methods.

Two types of targets are used—banners for aircraft gunnery practice and buckets for shipboard and shore-based firing runs. Both types are radar-reflecting and about 30 feet long.

The targets are dropped out of a hatch on the twin-engine JD-1 utility plane attached to a ⅛-inch steel cable. About 7000 feet of the target cable is reeled out during the firing run.

Another method of launching the target is to drag it into the air from the ground. This method is used with F9F-8 *Cougar* jets with the tow cable attached to the dive flaps of the swept-wing plane.

In aerial work a division of four jets will make firing runs on one target. Each fires ammunition painted with different colors of

YESTERDAY'S NAVY

On 2 Sep 1775, George Washington launched the beginnings of the Continental Navy by instructing Nicholson Broughton to proceed in the schooner *Hannah* against British transports to prevent reinforcements from reaching the enemy at Boston. The battle of Lake Champlain was fought on 11 Sep 1814 when 14 U. S. ships defeated 16 British ships. U. S. Navy ships were among the first to render aid to Yokohama and Tokyo, destroyed by an earthquake 2 Sep 1918. Twenty-seven years later to the day, Japan formally surrendered to U. S. on board USS *Missouri*.

printing ink so that the hits scored by each plane may be counted after the banner is dropped over the airfield. Jets may also make their firing runs with motion picture cameras mounted in the gun positions. The resulting film will tell the pilot whether he was right or wrong.

When a bucket is towed for ship firing exercises it is dropped at sea so that the ship can pick it up and determine firing accuracy. Flotation pads keep the targets afloat.

If practice makes perfect, Utility Squadron Five is helping to keep Far East Navy marksmanship in top form as they "drag the bag for MAG and CAG."

A Leash for Cats

Engineers are constantly working to develop ever higher speeds but at the same time they must find ways to rid speed of its potential destructive power.

An example of such a situation is the Runaway Shot Preventor (RSP), an electro-mechanical safety device developed by Navy scientists for use with steam catapults aboard aircraft carriers.

Because of the additional force required to catapult the heavy jet planes in Fleet use today, steam catapults are replacing less powerful launching systems. A steam catapult on the loose, however, may cause severe damage to both ship and aircraft. The RSP is designed to prevent damage, in the event the catapult suddenly builds up excessive speed, by shutting off the steam supply in two-tenths of a second. At this point a water brake takes over to bring the catapult's shuttle to a safe stop, thereby providing the needed safety factor.

Navy Rescues Chinese Ship

Teamwork on the part of uss *Worcester* (CL 144), *Lyman K. Swenson* (DD 729) and *Irwin* (DD 794) saved the Chinese Nationalist steamer *Ping Tung* from sinking after she had struck a reef off Yokoate Shima and had run aground.

The cruiser was the first U. S. ship to arrive at the scene, about 150 miles northeast of Okinawa. She sent in two boats to investigate while a merchant ship stood off the island evacuating the crew of the stricken steamer. Members of *Worcester's* crew determined the extent of the damage and repair parties were sent over to put a temporary patch on the underwater body of the ship.

OFF TO THE MED—*USS Dominant* (MSO 431) leaves Charleston to join Sixth Fleet. First port of call for her second tour with Sixth is Island of Rhodes.

At this point the two destroyers joined in the repair effort. A former underwater demolition man, LT R. D. Clark, from the destroyer *Swenson*, made repeated dives under *Ping Tung* to apply the patch prepared by damage control experts on board the cruiser. Just before his bottled air ran out, Clark succeeded in securing the patch.

The destroyer escort uss *Hanna* (DE 449) stood by *Ping Tung* until arrival of a salvage ship.

Busy B U

Men of Boat Unit Two at the Amphibious Base, Little Creek, Va., have been busy testing a group of new LCPLs, receiving indoctrination in the operation of a new LCM model and earning a commendation.

Four new types of LCPLs are being tested by the unit in cooperation with the Amphibious Test and Evaluating Unit and other Little Creek commands. The new boats are described as being larger and more powerful. A primary asset is their increased speed which allows them to keep step with present day amphibious tactics.

If found suitable, the craft will be used by boat group commanders and control officers for command purposes.

Past the testing stage are two LCM (8) models being operated by the unit for training purposes. Slated to receive 12 of the modified landing craft, Boat Unit Two borrowed the two craft from the Army Transportation Corps.

Compared to older LCM models the new craft carry additional cargo at higher speeds, are more seaworthy, yet require about the same size crew. Transported to the landing area via landing ship dock, the LCM (8) can be used to carry the largest tank now assigned to the Marine Corps. It also performs well as a salvage craft for smaller landing craft.

During the dash for the beach, the 60-ton T-43 tank secured in the LCM well deck can fire its 120-mm cannon over the craft's bow at enemy positions on the shore.

The two LCMs assigned to the unit were used in the amphibious training exercise Marlex 1-57 recently, to the satisfaction of all hands.

The detachment of Boat Unit Two in the Med, aboard the uss *Spiegel Grove* (LSD 32), received a letter of commendation from the LSD's commanding officer for their "extreme interest and most active efforts in ensuring that they were at all times ready in every respect to meet their commitments."

Torpedo Retrievers

The Navy has awarded two contracts for the construction of five 72-foot torpedo retriever boats.

The wooden-hulled vessels, which are designed to retrieve practice torpedoes, will be 72 feet nine-inches long, have a beam of 17 feet and displace 53 tons. Each will be equipped with eight diesel engines arranged in "quads" and capable of developing 1300 horsepower. Cruising range of the retrievers will be 180 nautical miles when cruising at a maximum speed of 18 knots.

OVER THE TOP—Descending from his F3H *Demon,* CDR J. S. HILL, USN, after 100th landing becomes first to qualify as 'Centurian' on *Forrestal*-class carrier.

Carrier-to-Carrier Flight

The world's fastest Navy fighter—the F8U-1—not long ago demonstrated that the nation's sea arm can quickly shift its carrier-based aircraft from ocean to ocean with no reliance on land bases or the Panama Canal.

In the first coast-to-coast, carrier-to-carrier fighter flight ever recorded, two Navy pilots took off in 1000-miles-an-hour-plus *Crusaders* from USS *Bon Homme Richard* (CVA 31) which was steaming off San Diego, Calif., streaked across the country and landed three hours and 28 minutes later on board USS *Saratoga* (CVA 60) off the east coast of Florida, a distance of some 2200 miles.

The flight underlined the Navy's ability to transfer its newest fighters from a carrier on one coast to a carrier on the opposite coast without having to land or be carried on a time-consuming trip through the Panama Canal.

The only major slackening in the planes' pace came when the pilots slowed down for refueling over the Dallas-Fort Worth area. Here, the planes dropped from 45,000 feet to 25,000 feet and reduced their speed to take on hundreds of gallons of fuel from two aerial "filling stations," which consisted of AJ-2 tankers from VAH-11, Sanford, Fla., temporarily based at NAS Dallas.

The *Crusaders* used were standard operational aircraft similar to those being delivered to the Fleet for operational service with squadrons now forming on both the West Coast and East Coast of the country.

Focusing on the Sun

One of the most photographed spots in the universe during the next 18 months will be the sun, which will be exposed to the lenses of Navy cameras every 30 seconds throughout the morning and afternoon of each day.

The work is being done by the Radio Astronomy Branch of the Naval Research Laboratory in Washington as part of the U. S. participation in the International Geophysical Year.

A device that automatically and continuously records events in what is known as "the hydrogen alpha line of the solar spectrum" will record the sun's activities on 35-mm. motion picture film. Many of the instruments (called Lyot monochromatic heliographs) have been installed in the world's 24 time zones.

As the Navy scientists discover evidence of unusual solar activity (solar "flares" or sun spots) they will notify the IGY World Warning Agency. In this manner scientists will obtain a documentary record of the sun's activity during the IGY (1 Jul 1957-31 Dec 1958).

High Flying Suit

A full pressure high altitude suit—the kind naval aviators will use when entering the stratosphere—has been flight-tested successfully by the Naval Air Test Center, Patuxent River, Md.

The tests demonstrated that Navy pilots wearing the suit, in development since 1951, will be able to fly and fight in supersonic craft in the stratosphere as easily as they now fly in pressurized cabins in standard flying uniforms.

The suit is required for protection against loss of cabin pressure at very high altitudes where exposure to the thin atmosphere would boil a man's blood in seconds. It also retains life-saving pressure after a pilot has bailed out at stratospheric altitudes and, in case of a possible ditching in cold water, will keep the pilot afloat.

Made of rubber and nylon, the suit provides an artificial, pressurized atmosphere for the pilot. It contains its own communication, oxygen and ventilation systems, yet has more mobility, better visibility, comfort, and protective features than previous models of high-altitude gear.

The suit contains its own atmosphere, with sufficient pressure to maintain life in the rarified upper atmosphere. It is sensitive to drops in aircraft cabin pressure, automatically pressurizing itself when such drops occur. In laboratory tests it proved its worth in an altitude chamber which simulated pressure at 80,000 feet for an 11-hour period.

ATU Travels 13,000,000 Miles

Someone has taken the trouble to figure out that, since the inception of Advanced Training Unit (ATU) 206, of Sherman Field, Pensacola, Fla., its members have logged the equivalent of nearly 13 million air miles of flying. That's enough to give more than 500 student pilots their advanced training in single-seat jets. Our friend with the figures also points out that, in two years of flying, the unit has consumed 22 million gallons of aviation fuel in the process of keeping 51,000 flights in the air.

These statistics were accumulated by the men and planes of ATU 206, which set up shop with a total of three officers, 70 enlisted men and four F9F *Panthers*. From this modest beginning, ATU 206 has expanded to 60 officers, 900 enlisted men and 80 *Panthers,* all of which help put the student pilots through some pretty rugged training. The eight-week curriculum consists of ground instruction, air-to-air gunnery, rockets, bombing, and night training hops among other phases of advanced combat tactics, and is climaxed by a cross-country flight to test navigational prowess of students.

APN Cures Flying Headaches

If you compare what pilots will be able to do in the future with the Navy's new automatic navigator, aviators up to now have been flying by "the seat of their pants."

Designed to provide pilots and navigators with continuous navigational information automatically, this new device, designated APN-67, is the culmination of 10 years of research.

The importance of ground speed and drift angle data has been recognized for a long time. This and other information supplied by APN-67 will enable pilots to increase their speed and range merely by being able to take advantage of prevailing winds. In terms of military importance, this development means increased mission capabilities, greater fuel economy and accurate location reports of enemy ship and aircraft contacts.

A specially adapted version of the automatic navigator will make anti-submarine warfare helicopters capable of operating in all types of weather.

NEW NAVIGATOR—Automatic device is developed to give continuous navigational info including latitude, longitude, ground speed, drift, track.

They Even Have Same Dentist

Ever since 1945 Chief Richard Paul Schulz has been trying to solve a mystery. Now, thanks to his first meeting with Chief Richard Paul Schulz, he's finally done it.

Both chiefs—one a quartermaster and the other, a personnel man—are stationed at the Naval Training Center, San Diego, Calif., and sharing the same name has gotten them involved in a number of mixups. One of the biggest of them all was an incident that had puzzled Quartermaster Schulz for almost 12 years.

"In late 1945," he says, "I was informed by the Bureau of Naval Personnel that I was being promoted to chief yeoman. I told my skipper I'd never done any yeoman work and didn't think I should accept the advancement in that rating."

That whole business was squared away a long time ago, but ever since it happened, Quartermaster Schultz had been wondering about it. However, since he's met the other Richard Paul Schulz he's decided that the Bureau simply got him confused with Personnel Man Schulz, who used to be a yeoman.

That may have cleared up one puzzle, but unfortunately, now that both Chief Schulzes are assigned to the Training Center, the confusion will probably increase. In fact, there have already been a couple of indications of that trend.

Before Chief Personnel Man Schulz reported for duty at the Center he went on leave. Meanwhile, 12 letters were forwarded to him from Kwajalein, his previous duty station. The mail was delivered to Chief Quartermaster Schulz, who had opened eight of the letters before he realized they weren't for him.

And, one Sunday morning, Personnel Man Schulz was roused out of bed by a phone call from the Center's dental clinic, where Quartermaster Schulz had had a tooth pulled the day before. The dental technician on duty, needing some additional information for his records, had awakened the wrong Schulz to get it.

RINGER—Smoke from three-inch guns of *USS Philip (DDE 498)* forms ring during gunnery competition among DD Squadron 25 with Pacific Fleet.

"I suppose," sighed Chief Richard Paul Schulz (the personnel man), "that they'll be getting us confused so long as we're here together."

"Yes," echoed Chief Richard Paul Schulz (the quartermaster), "I guess they will."

MSTS Completes DEW Line Duty

The resupply of the Arctic DEW Line will be carried on by Canada after the 1957 operations by the Military Sea Transportation Service end.

MSTS was originally assigned the three-year task of delivering construction materials and supplies to the entire DEW Line network. Navy, MSTS, Coast Guard, Royal Canadian Navy and merchant-type ships carried supplies to the Far North where the Army Transportation Corps unloaded them. Nearly 100 ships participated in this year's operations.

Six MSTS ships are to remain in the North after they complete this year's operations where they will be turned over to the U.S. Air Force. The Air Force, which is responsible for the DEW Line, will lease the ships to the Canadians. The six ships include three LSTs and an equal number of AOG-type tankers.

Twelve Army LCM landing craft will also report to Port Brabant to winter over with MSTS ships.

SIX YEARS on *USS Bremerton* ended for CHBOSN Craft, piped to Reserve.

Shipmates Pipe Warrant Officer Over the Side

"The toughest job I ever had was to stand up here and say good-bye," Chief Boatswain William P. Craft, Jr., told his assembled shipmates aboard the heavy cruiser USS *Bremerton* (CA 130) in Long Beach. The colorful Warrant Officer was honored during an all-hands-aft ceremony after he had accompanied Rear Admiral Roy S. Benson, Commander Cruiser Division One, as honorary inspecting officer during a personnel inspection.

"Boats," who helped bring *Bremerton* out of mothballs in 1951 in time for two tours of Korean combat duty, and served aboard her for almost six years, was transferred 16 July to the Pacific Reserve Fleet in Long Beach, California.

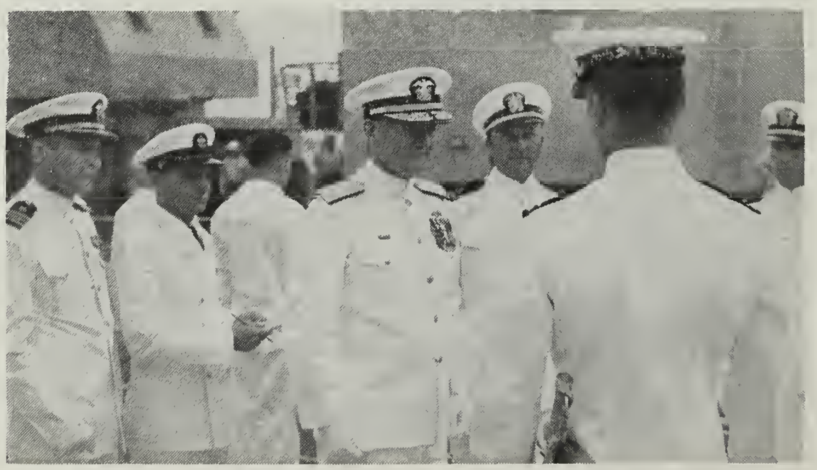
The cruiser rolled out the red carpet for Boatswain Craft when he left the ship for the last time. Eight of his fellow Warrant Officers served as honorary side boys as he was piped over the side.

Rear Admiral Benson commended Boatswain Craft for his part in "making *Bremerton* a first class fighting ship," and for his "splendid performance of duty" while aboard the cruiser.

In reading the commendation, the ship's acting commanding officer, Commander Robert M. Brownlie, pointed out that Craft's Navy career has been a "bottom-to-top story." The Boatswain entered the Navy in 1938 as a seaman recruit and is at present awaiting promotion to W-4, the highest grade a Warrant Officer can hold.

When "Boats" came aboard *Bremerton* in 1951 the ship had been in mothballs for three years, but when he left her this month she wore the Pacific Fleet Cruiser Battle Efficiency plaque on her quarterdeck.

During Craft's long tour of duty as *Bremerton's* Chief Boatswain, he made six extended tours of duty in the Far East. He won a Navy Commendation with Ribbon and Combat V during the cruiser's combat duty in the Korean conflict.



ALL HANDS AFT—Chief Boatswain W. P. Craft, USN, (third from right) inspects mates with RADM R. S. Benson, USN. Ceremonies on *Bremerton*.

Bo's'ns Mates Honored

Boatswain's mates have been cussed and discussed ever since the rate was inaugurated into the Navy. But on board the Pearl Harbor-based USS *Walker* (DDE 517), three of them have a special place of honor.

CDR C. H. Smith, captain of *Walker*, presented sterling silver boatswain's calls to E. Z. Walter, BMC, L. W. Bucher, BM1, and W. L. Parkerson, BM3. The calls were engraved with the individual's names and "USS *Walker* — 1957."

The presentation was made for their outstanding service to the Navy, their exceptional performance as boatswain's mates and for the way they handle the responsibility of keeping the ship clean and neat.

Win Assault Boat Insigne

The attack transport USS *Noble* (APA 218) and the attack cargo ship USS *Tulare* (AKA 112), both units of the Pacific Fleet, were recently awarded the "Assault Boat Insigne." They are the first of the Pacific Fleet to win the awards.

Made up of two crossed anchors horizontally pierced by an arrow, this device indicates high proficiency in amphibious tactics. It is awarded to ships in the Amphibious Force which attain a minimum score of 90 in boat control—debarkation and unloading—and beaching tactics during an official amphibious exercise or operation.

The presentation ceremonies of both ships were further highlighted by *Noble* and *Tulare* receiving the Engineering Red "E" for excellent conduct of engineering exercises and for the ships' complete operational reliability during the past year.

Stellar Performance by L. A.

While USS *Los Angeles* (CA 135) was undergoing a routine overhaul at the Mare Island Naval Shipyard, the entire crew of the heavy cruiser trooped over to the Shipyard to see the movie "Joe Butterfly."

Reason for this en masse viewing was the fact that while the ship was in Yokohama, scenes from the movie were shot aboard *Los Angeles* and both ship and crew appeared in it.

After viewing the film, critical comments by the crew indicated that the "movie stars" on board *Los Angeles* turned in a stellar performance.

Other members of the cast included Audie Murphy, George Nader and Keenan Wynn.

Zipper College

The Florida Group of the Atlantic Reserve Fleet conducts a continuous training program at its "Zipper College," which compares favorably to many formal educational institutions.

Every man reporting to the Naval Station at Green Cove Springs, Fla., is interviewed by the education officer and given a battery of tests. After an individual's educational background, weaknesses, aptitudes and interests are determined, the education officer maps out a course of study for him.

Required subjects for all personnel assigned to the Zipper Fleet include fire fighting, the safe and proper use of small arms, reactivation tests of ships, and Uniform Code of Military Justice.

In addition to the required subjects, everyone is urged to take high school or college level correspondence courses. Instructors are available to assist with off-duty study.

After-hour courses currently being offered at Green Cove Springs include typing, shorthand, American literature, college mathematics, algebra, American history, American government and economics.

Zipper College also offers a course in ship activation for naval and Coast Guard Reservists from the 6th, 8th and 9th Naval Districts.

Hams Say It With Pictures

Sports photos and Sunday comics are getting to be old stuff to those Navymen who are shivering it out in Deep Freeze. Since May, they have been receiving such items via radio facsimile from radio amateurs in the United States.

Although this marks a first for the amateurs to transmit photos over the 8437-mile span, the Navy has been sending photographs by radio for many months.

Transmission of the photos was originated by W2KCR at North Syracuse, N. Y., by the Operation Deep Freeze Committee of the Radio Amateurs of Greater Syracuse as a function of the American Red Cross Amateur Radio Morale Message Service.

Although Dick Tracy has been placed in many a predicament in various climes, it was probably the first time that he and the rest of the characters appearing in the comic strip ever roamed around the Antarctic. In addition to the comic strip, news stories and a photo of the knockout of Gene Fullmer by Sugar Ray Robinson were sent.

The new radio picture transmissions are a forecast of similar and more personal transmissions in the future. The committee plans to send future transmissions during the remainder of the International Geophysical Year with the idea in mind that this sort of transmission is personal, non-official and of a morale nature.

Little Army-Navy Game Will Be Played As Benefit for Memorial Stadium Fund

Since last month's report of donations to the Navy-Marine Corps Memorial Stadium, another $100,000 has been added to the fund, bringing it well over the half-way mark. As of 1 August, more than $600,000 has been contributed which, in addition to the $1,000,000 donation by the Naval Academy Atheletic Association, assures completion of at least one half of the stadium.

In anticipation that the fund goal will be reached ($1,500,000 is still needed), the opening of the stadium has been set for the fall of 1959. It is hoped to play three home games in the new Memorial Stadium that season.

To give the fund a further push in the right direction, this year a "little" Army-Navy game will be played at Annapolis on 26 October as a benefit, with all proceeds going to the Memorial Stadium Fund.

Navy has been a member of the Eastern Intercollegiate 150-pound Football League for the past 11 years and has won the championship in nine of them. Army joins this league for the first time this year.

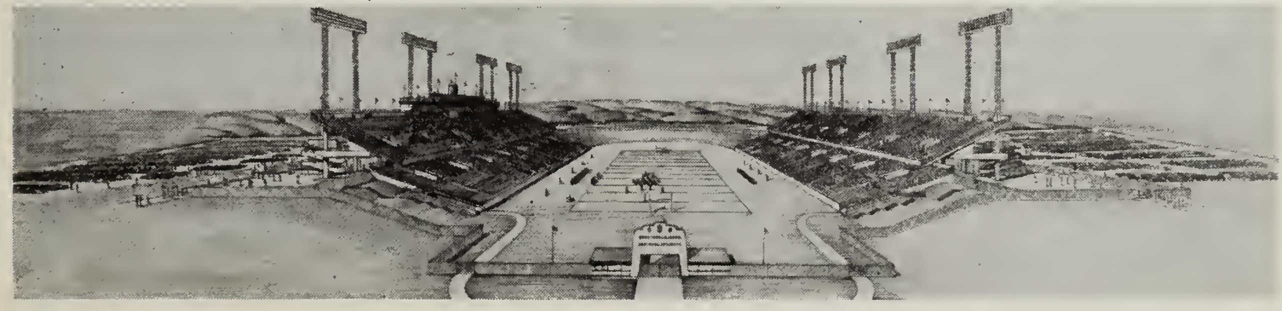
Tickets will be for general admission at two dollars each and may be obtained by sending your money to the Memorial Stadium, Annapolis, Md. A sellout is expected.

Meanwhile, a total of more than $196,000 has been received from units of the Navy and Marine Corps. This may be broken down as follows:

Atlantic Fleet	**$58,200**
Pacific Fleet	**56,241**
Miscellaneous Sea and Foreign	**8,767**
First Naval District	**4,364**
Third Naval District	**7,285**
Fourth Naval District	**3,970**
Fifth Naval District	**8,558**
Sixth Naval District	**8,820**
Eighth Naval District	**1,318**
Ninth Naval District	**7,616**
Tenth Naval District	**6,746**
Eleventh Naval District	**2,555**
Twelfth Naval District	**5,017**
Thirteenth Naval District	**743**
Fourteenth Naval District	**1,244**
Fifteenth Naval District	**88**
Potomac River Naval Command	**4,455**
Severn River Naval Command	**10,777**

Many Reserve units and veterans organizations have made contributions through the dedication of $100 memorial chairs to the members of their organizations. Groups of active and retired personnel are contributing toward memorial chairs for crews of ships or units that have been sunk, scrapped, mothballed or disbanded, and to the individuals for whom these ships were named.

FUNDS FOR NAVY-MARINE Corps Memorial Stadium, shown here in artist's sketch, have passed half way mark.

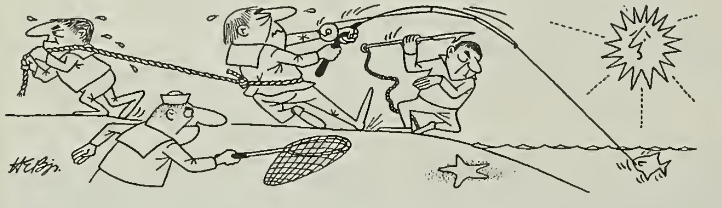


Sideline Strategy

You find fishermen in all walks of life and the Navy is no exception. From the wide range of tackle found in most Exchanges and the amount of fishing equipment on hand in the majority of ship or station athletic-gear lockers, it's quite apparent that interest in fishing runs high among Navymen and their dependents.

No matter where you are, or what season it is, you'll run into Navymen swapping fish stories. They're all experts at that. The average bluejacket, in the course of his travels, has the opportunity to fish in some of the world's greatest spots — which are merely dreams to most of the country's 43 million anglers.

Whether stationed in northern Alaska, sunny Hawaii or in the shadow of the nation's capital, you'll see Navymen fishing. If in Alaska, you'd be lured to the virgin lakes and streams by all types of salmon, trout and the fantastic grayling; Hawaii's beaches and reefs offer an endless variety of fish—many which have names as long as your catch; while the Potomac River which runs through Washington, D.C. rates an "outstanding" for its spring shad and herring fishing.



With the summer season upon us, there's no reason why you shouldn't drop into Special Services and check out a hook, line and sinker. You don't have to be stationed in a fishermen's paradise to enjoy fishing either. Every day you hear of record catches, big ones getting away or being landed in areas where you would least expect to catch 'lunkers.'

Typical of these is the 210-pound jewfish that Ray McDowell, SN, Walt McKeon, BM3, and Tom Warren, FN, of USS *Bushnell* (AS 15) landed while on a fishing party during deployment to the Caribbean.

Out NAS Oakland way, you can still hear Robert W. Tate, AB1, boasting of his "record" 33-pound king salmon that he landed last fall off the Farallon Islands near San Francisco.

Then there's H. S. Bonner, YNC, of NTC San Diego, who recently made a haul of 12 yellowtail averaging 15 pounds each; one nine-pound, six-ounce barracuda; 15 bonita, all four pounders, and a sackful of bottom fish. Earlier this year he caught a 39½-pound halibut.

A typical fish story comes from W. C. Matthews, ABC, of Cecil Field. During his first fishing trip he landed a nine-pound bass—with a borrowed rod and reel, no less. The next day he bought a complete outfit and readily admits—"he's hooked."

Here's the biggest fish story heard to date and with it should go the Navy's top angler laurels. While fishing off the fantail of USS *Leyte* (CVS 32) James W. McCall, BM2, caught a 1050-pound, 11-foot, six-inch shark. After an hour-and-a-half battle, he hauled it aboard—with the help of 14 of his shipmates. And that's no fish story.

—H. G. Baker, JOC, USN

Rapid Fire Range

What is believed to be the first indoor international rapid fire pistol range to be constructed on a reduced scale is now part of the equipment of the Naval Air Test Center Rifle and Pistol Club at Patuxent River, Md.

Charles L. Frazier, AOC, small arms marksmanship instructor at the Center, and Franklin B. Vocke, ADC, are the two enthusiasts responsible for its design and construction.

All targets used are reduced to scale according to specifications of the National Rifle Association.

USNA Pistol Team Undefeated

The U.S. Naval Academy's pistol team went undefeated during the 1957 season. In out-shooting nine opponents, the midshipmen won more awards than any of the Academy's previous pistol squads, which have competed in intercollegiate shooting since 1942.

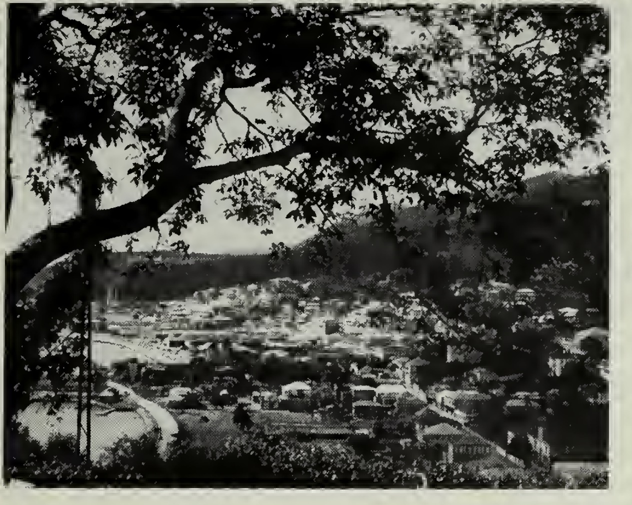
Coached by CAPT Edward Y. Holt, Jr., USMC, the sharpshooting midshipmen won by record scores, two national titles—the U.S. Revolver Association's National Championship, and Intercollegiate Pistol Crown. They also won the NRA's NROTC team championship.

In addition to the team awards, the midshipmen won numerous individual championships. Seven members of the 10-man team were selected for the All-America squad.

Top individual marksman on the Academy squad was Midshipman First Class Richard T. Vosseler. He was selected as the Number One man on the first team All-America. Midshipman Vosseler (now ENS, USN) was the first Naval Academy pistoleer to be so honored. He scored the high average in 1957 for the U.S. Revolver Association's top spot and had the highest average mark for the Naval Academy's shooters.

Vosseler, a three-time All-America choice, placed second in the NRA individual competition and was runner-up in the National Mid-Winter championships. Midshipman Owen C. Baker, (now 2nd Lt., USMC) captain of the pistol team, was first master in the National Mid-Winter competition.

From all indications, the midshipmen should bring home the bacon during the '58 season as well, since only four members of the 10-man team were lost through graduation.



Down Caribbean Way

When you belong to a crew of a CVS whose job is to hunt down and kill enemy subs—and you're chock-full of all the latest techniques with a ship-full of the latest gear, it's nice to get to sea and give it a try.

Navymen of uss *Leyte* (CVS 32) found it especially enjoyable as they pursued the "enemy" southward from Quonset Point to the sunny climes of the Atlantic down Caribbean way. Here they hove to for liberty in such spots as Panama, Cuba, and the island of St. Thomas in the Virgin Islands with its plush tropical splendor pictured here.

They found the rocky island that had once been the roaring headquarters of such pirates as Blackbeard and Henry Morgan a pleasant sunny vacation spot.

Top Left: View from Bluebeard's Castle (rt) shows almost entire island. *Right*: *Leyte*men enjoy hotel visit. *Below right*: Navymen record scenic streets. *Below left*: Sea smoke caused by cold air over warm gulf stream marks end of tropical cruise as CVS 32 heads home.

—Photos by N. H. Ingells, SN, USN

Columbus Liked Living in Cuba, and So Does the Navy Family

When Columbus first saw Cuba in 1492, he called it the "most beautiful land that eyes have ever beheld."

Modern seafarers might not go that far in their descriptions, but most present-day sailors who've seen service at the U.S. Naval Base, Guantanamo Bay, are likely to agree that it's a pretty good place to spend a tour of overseas duty. And, since "Gitmo" is the Navy's biggest base in the West Indies, quite a few Navymen are assigned there every year. If you're about to become one of them, you might want to read this latest rundown on what it's like.

Climate—The climate of Guantanamo Bay is best described as semi-tropical. During the winter months temperatures range from 62 degrees at midnight to 85 degrees at noon, and during the summer months from 72 at midnight to 92 at noon. This may sound hot, but because of the prevailing easterly winds it's really not so bad.

The chief rainy season occurs in October and November, with a minor one in April and May. Rainstorms are sudden and heavy but they end quickly. Unlike many tropical areas, there are no prolonged periods of high humidity or of dampness and mildew. The Guantanamo Bay area is considerably more arid than the rest of Cuba. In general the climate is one of the most healthful in the tropics.

Inoculations—For the protection of your health and that of your children immunizations for smallpox, typhoid-paratyphoid, tetanus or DPT (diphtheria, tetanus and pertussis) are required before your arrival at Guantanamo Bay. It's best to get these shots before you reach the port of embarkation as you will not be permitted to go overseas without them.

Immunizations may be performed by a Medical Officer of one of the Military Services or the Public Health Service or other reputable physician in private practice. A certificate must be obtained from the physician administering the shots and this certificate must be kept in your possession at all times.

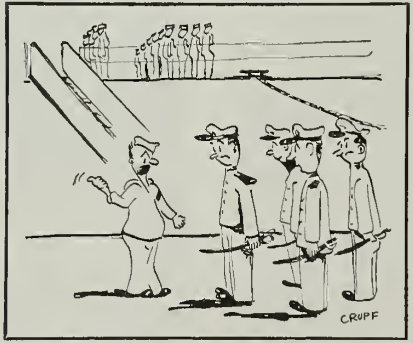
All-Navy Cartoon Contest
Sheldon Glassner, DMSN, USN

"Are you kidding? I can see that one as clear as day. It's an AD *Skyraider*."

Transportation—There are four different ways dependents can travel. Two methods are via government means: surface (Military Sea Transportation Service) and air (Fleet Logistic Air Wing). Assignment of government transportation for dependents' travel (both surface and air) is controlled by the Transportation Section of the Bureau of Naval Personnel, located in Arlington Annex, Arlington, Va.

The two remaining methods of travel to Guantanamo Bay are commercial air or private automobile. Commercial airline flights depart from Miami, Fla., daily to Havana or Camaguey, Cuba, and thence via Santiago to Guantanamo City.

All-Navy Cartoon Contest
William James Cropf, QMI, USN



"You better get aboard right away—that chief bos'n's mate says he's tired of waiting around for you!"

It might be well to remember that your arrival in Guantanamo City does not conclude your journey. There are about 40 additional miles to travel before you arrive on the Naval Base. This remaining distance can be covered by private automobile directly to the base or by Cuban taxi or train to Caimanera, Cuba, thence by boat to the base.

For those who want to see some of Cuba's charm while traveling to Guantanamo Bay, it is possible to travel the entire distance via private automobile, if you are willing to accept minor inconveniences and spend a little money. Periodically, drive-on, drive-off automobile and passenger ferry service is available from Miami and Key West, Fla., to the ports of Havana, and Cardenas, Cuba. Consult your local auto club or the one in Miami for information regarding this service.

No passport is required of U.S. or Canadian citizens entering Cuba, but proof of citizenship (birth certificate, naturalization certificate, etc.) must be available for presentation.

Automobile drivers must have in their possession a title of ownership, (or letter from owner legalized by the Cuban Consul, or executed before a Notary Public), registration of vehicle for the current year, operator's license, and identity card issued by immigration authorities upon arrival. It is recommended that you carry an effective automobile insurance policy containing Cuban coverage.

Cuban customs permits free entry of automobiles, regular baggage, cameras, radios, typewriters, 400 cigarettes, etc. If you intend to travel by ferry and want to bring along a dog, be sure you obtain a certificate of inoculation certified by a Cuban Consular Official. In Miami this office is in the Pan-American Bank Building. The customs officials will inspect your baggage at your port of entry into Cuba, Havana or Camaguey if traveling by air, and Havana or Cardenas if you are driving through to these ports.

Housing—The Naval Base, Guantanamo Bay, is still considered a critical housing area. However, this situation is steadily improving as additional government quarters (recently authorized and under construction) become available.

Government family housing quarters are assigned to eligible personnel, who are authorized transportation for dependents and household effects at government expense. This includes enlisted personnel of pay grade E-4 with more than four years' military service and all higher pay grades.

Regardless of activity to which assigned, all those desiring family housing (except as indicated below) are required to remain on the Base Housing Waiting List until quarters become available. Precedence on the list is established as of the date of actual reporting aboard the base for duty.

Waiting time on the list varies between three to six months depending upon the time of the year, with the shorter waiting period usually occurring during the spring and summer turnover. Entry of dependents will not be authorized until Commander Naval Base can certify that government family quarters are available.

Concurrent travel is usually authorized for the dependents of: officers of the rank of commander and above when occupying commander and above billets, and all Marine Corps officers; personnel whose wives have been accepted for employment as school-teachers at the Naval Base School; and personnel whose requests for unusual and/or humanitarian consideration have been approved.

Officers' Quarters—Officers' public family quarters consist of three- and two-bedroom furnished houses and two-bedroom furnished apartments, all of attractive wood frame construction.

Enlisted Quarters—Public quarters for enlisted personnel consist of furnished one- two- and three-bedroom apartment-type "replacement houses" of concrete block construction; and half quonsets, which are being replaced by permanent type units.

In fairness to the families already on the base awaiting assignment to replacement housing, all newly arrived enlisted families, unless they are eligible for and have selected the "low cost" defense housing, are assigned initially to the quonset-type public quarters. While occupying these quarters their names remain on the waiting list for subsequent reassignment to replacement housing.

There are a few two-bedroom detached houses on the base maintained by the Naval Air Station and the Marine Barracks commands

WHAT'S IN A NAME

Skyraider

On 18 Mar 1945 the prototype of a plane designed to replace the old SBD dive-bomber was flown for the first time. It was the AD *Skyraider*, the world's most powerful single-engine, propeller-driven plane, and in time it was also to prove itself the world's most versatile combat aircraft.

The "Able Dog" was born too late to see service in World War II, but by the beginning of the Korean conflict it had become the Navy's standard carrier-based attack plane. Thus, on 3 Jul 1950, just six days after American sea and air power had been ordered to the aid of South Korea, *Skyraiders* from USS *Valley Forge* (CVA 45, now CVS 45) were blasting enemy targets with their deadly payloads. From then on there was hardly a day when the ADs didn't strike, earning high praise from the men who knew them best.

"I am convinced," said RADM John W. Hoskins, USN, commander of Task Force 77, "that the *Skyraider* is the best and most effective close support airplane in the world today."

The flyers of TF 77 claimed, " . . . the *Skyraider* as employed in such a task force is the finest offensive weapon the United States has."

And, Navy officials stated, "The *Skyraider* has consistently delivered the major weight of bombs in strikes over Korea."

Operating around the clock, Navy and Marine ADs in Korea hit the enemy with bombs, rockets, torpedoes, mines, depth charges and napalm, until it was said that Able Dogs had carried everything but the kitchen sink. Then, even that exception to the AD's record of versatility was removed by a plane crew and pilot from USS *Princeton* (CVA 37, now CVS 37) who actually rigged up an old kitchen sink on a 2000-pound bomb and dropped it on the enemy.

The Navy has used ADs for almost every type of mission that an aircraft can fly, from ambulance plane to atomic bomber. In Korea it regularly carried 4000- to 8000-pound bomb loads, although it was originally designed to meet only a 1000-pound bomb-carrying specification. And, at Dallas, Tex., in May 1953 an AD-4 set an all-time, single-engine load-carrying mark when it took to the air with a total useful load of 14,941 pounds.

Skyraiders were produced in seven series, AD-1 through AD-7, and in 28 variations for a multitude of missions. The most versatile of them all was the AD-5 "multiplex" model, which could be converted with standard kits into any one of 12 or more combat or tactical versions, ranging from a six-place personnel transport to a long-range bomber.

Between 13 Jun 1945, when the Navy got its first *Skyraiders*, and 18 Feb 1957, when the last one was delivered, the Navy received 3180 of these planes, so there are still plenty of them around. From the outside they look about the same today as they did in 1945, but inside the structures and equipment have been changed almost completely.

Except for the AD-5, which has a side-by-side, two-place cockpit and large, plexiglas-enclosed rear compartment, the basic AD is a single-place, all-metal plane. It is capable of vertical diving speeds in excess of 500 miles per hour. Its range exceeds 1500 miles and it has a cruising speed up to 300 miles per hour.

Normal armament includes four forward-firing 20mm guns mounted in the wings and various arrangements of five-inch HVAR rockets and 11.75-inch *Tiny Tims*, all hung from external racks mounted under the wings or fuselage center line.

With all its versatility and firepower, it's little wonder this airborne arsenal has lasted so long. But now, with the *Skyraider* out of production, the handwriting is on the wall.

Alfa Delta, better known as Able Dog, is being replaced by jets.

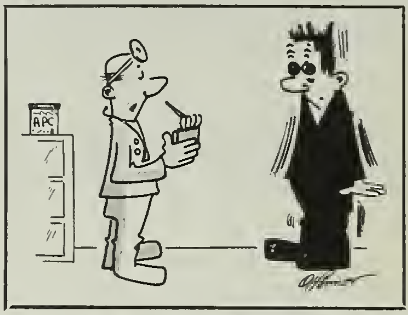
for assignment to the personnel of their commands.

In addition to public family quarters, there is a "low cost" Defense Housing project on the base consisting of two-bedroom bungalows of wood-frame construction. Rental allowance is not forfeited by personnel occupying Defense Housing. The monthly rental charge for all tenants is approximately $39.00 plus utilities. With the exception of stoves, refrigerators and water heaters, these bungalows are completely unfurnished. However, government-owned furniture, plain but adequate, is available; and an established minimum allowance of furniture per bungalow may be rented at a nominal rate.

Assignments to Defense Housing are normally made to enlisted personnel with four or more dependents, eligible for government family housing, who voluntarily elect the Defense Housing waiting list in preference to the public quarters waiting list when applying for base housing.

The present waiting time for Defense Housing is approximately five to six months. However, this waiting time is decreasing as new construction of public quarters progresses.

All-Navy Cartoon Contest
Neil F. O'Connor, ENS, USN



"Now you say you were painting the forward stack when they tested the . . ."

Household Effects—All government public quarters are equipped with essential furniture, including electric stoves and refrigerators. But, if you'd rather bring and use your own furniture you may do so. The government-provided living room furniture is mostly of the tropical rattan and bamboo type. In most of the permanent quarters, the furniture allowance does not completely furnish the living room and those units that have porches. It is advisable for you to bring such additional pieces as coffee and end tables, book cases, table lamps, throw rugs or inexpensive carpets, electric fans, pictures, and various other knicknacks to personalize your new home. Draperies and rugs are not government-furnished. It is recommended that neither large nor expensive rugs (nor heavy overstuffed furniture) be shipped into the area as past experience indicates that they can be easily ruined in the semi-tropical climate. The most popular rugs are grass or fibre.

Items that you will need, which are not provided, are such things as table, bed and bathroom linens, a complete assortment of kitchen utensils; and cooking ware, dishes, glassware, light blankets, shower curtains, etc. A washing machine and sewing machine are very useful, especially for families with children.

The electrical current on the base is the same as in the United States, 60 cycle, 110 volts, so your electrical appliances can be used without difficulty.

For home entertainment, a good radio (standard broadcast and short wave combination is best) should be included and if you have a television set, bring it along too. Hi-fi fans can also continue to enjoy the most recent recording releases, obtainable in the well stocked record shop at the Naval Air Station Exchange.

A handy service offered by the Special Services department to families arriving on the base in advance of their household effects, is the issue of an emergency household kit, which contains enough bed linens, towels, kitchen utensils, cooking ware, dishes, etc., to accommodate each member of the family until personal household effects arrive. A deposit of $5.00 is required when the household kit is checked out. When the items are all returned $3.00 is refunded and the remaining $2.00 is retained as a service charge.

Arrangements for the shipment of your household effects can be made by contacting the Supply Officer at the naval activity nearest your present address, or you may submit a request for information to the

Just for Laughs, Why Not Give the All-Navy Cartoon Contest a Go-Around?

Talented Navy artists and cartoonists and their dependents have the opportunity to compete again this year in the Third All-Navy Comic Cartoon Contest.

The Chief of Naval Personnel will present All-Navy Championship trophies to the five first place winners. The winning cartoons will be published in ALL HANDS.

Entries must be submitted in time to reach the Chief of Naval Personnel (Pers G11) for judging by 31 Dec 1957. This deadline is later than the one set up in BuPers Notice 1700 of 8 July which announced details for the Third All-Navy Comic Cartoon Contest.

The cartoon contest rules—the same as they were last year—are:

- All naval personnel on active duty and their bonafide dependents are eligible to submit entries.
- Comic (gag or situation) cartoons, to be acceptable, must have a Navy theme or background and be in good taste, suitable for general consumption.
- Cartoons must be in black ink on 8-x-10½ inch paper or illustration board.
- A contestant may enter as many cartoons as he wants to, but each entry must contain the following information and statement securely attached directly to the back of the entry:

1. Full name of originator
2. Rate or rank
3. Serial or file number
4. Duty Station
5. Hometown and name of hometown newspaper
6. A brief statement *certifying the cartoon is an original.*
7. "All claims to the attached entry are waived and I understand the Department of the Navy may use as desired. Signed ______________________."
(Contestant)
8. "Forwarded." Signed by Commanding Officer or his representative.

In the case of entries by dependents, they should supply the above information as well as the following statement: "I am a dependent of ______________________
(Navyman's name)
rank/rate, and serial or file number."

Bureau of Supplies and Accounts, Navy Department, Washington 25, D.C. If you are going to Guantanamo Bay ahead of your family, it's a good idea to leave with your wife a signed application for the shipment of household effects (NavSandA Form 34) accompanied by seven certified copies of the change of station orders. Otherwise, you should forward these papers to your wife so that arrangements for shipment may be made. After you reach Guantanamo Bay you can obtain an authorization for the entry of your shipment by submitting a request to Commander Naval Base. This authorization should accompany the shipment application.

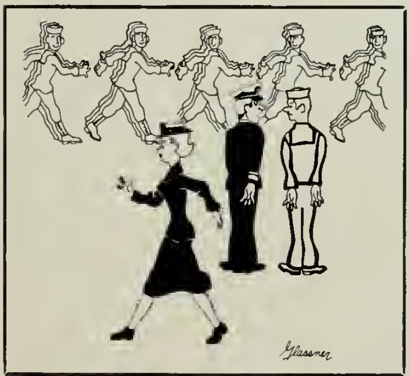
If you don't want to ship all of your household effects, or you want only part of them, your local Supply Officer can arrange to place these things in permanent government storage for the duration of your tour.

Supply your wife with additional certified copies of your change of station orders for any other shipments you may desire to make. It's also wise to give her a power of attorney to save the time it would take to forward applications back and forth for signature.

Civilian Clothing—When the time comes to pack the trunks and suitcases the little lady will want a good supply of cotton, linen and washable synthetic summer clothes for everyday wear. There is a dry-cleaning plant on the base but it does not specialize in ladies clothes. Cleaning even the simplest ladies' dresses can become very expensive.

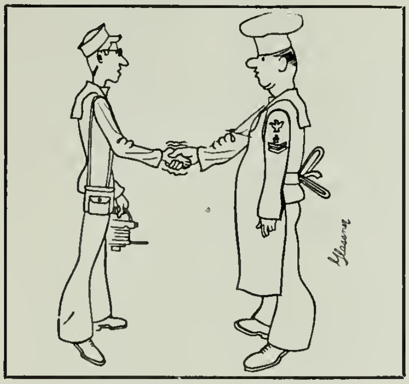
Sunback dresses and spectator sport dresses are very popular for most occasions. Your wife may want to include some cocktail dresses and a formal or two. Women may wear shorts or similar attire around the home, neighborhood and beach areas, but when engaged in public sports activities such as golf, bowling, etc., only Bermuda-length shorts are acceptable. Exposed midriff is not considered proper attire.

All-Navy Cartoon Contest
Sheldon Glassner, DMSN, USN



"TERWILLIGER, this is a very poorly trained company! I distinctly heard you give 'BY THE LEFT FLANK' and yet they're doing an 'EYES RIGHT' . . . WHY?"

All-Navy Cartoon Contest
Sheldon Glassner, DMSN, USN



"The name's Uber, Commissaryman-third class." "Mine's Johnson, Photographer's Mate . . ."

Military personnel are required to wear the prescribed uniform most of the time. However, they are permitted to wear civilian clothing in and around their homes, homes of friends, while engaging in sports activities or riding to and from such activities, or at special functions for which the wearing of civilian clothes has been authorized specifically by Commander Naval Base. In such instances the predominant attire is slacks and sport or Aloha shirts.

You'll want to bring along bathing suits for every member of the family. Since beach sand is coarse and sharp and coral is abundant, a suitable light sneaker or sandal is recommended.

Although the daytime temperatures may sometimes reach into the lower 90s, the evenings cool down considerably especially during the months between November and March. A supply of warmer clothing for the entire family is advisable. Lightweight wraps, coats, sweaters or stoles, and even wool dresses or suits can be used to good advantage when attending outdoor activities during the winter season.

While some clothing is carried at the Exchange stores, the supply is irregular, sizes limited, and there aren't many styles to choose from. Shoes in particular are difficult to obtain in the proper sizes.

It may be helpful to visit the personal shopper in your favorite department store before you leave home to discuss the procedure in sending for items you cannot obtain on the base. You will also find it useful to keep your charge accounts open at some of your favorite stores. A good deal of your shopping will also be done through the mail order catalogs.

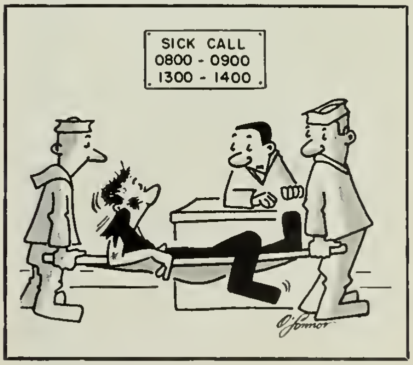
Uniforms—During working hours and until 1830 daily, officers and CPOs are authorized to wear the Cotton Working Khaki, Service Dress Khaki, Tropical Khaki or Tropical White uniform. Enlisted men wear the Undress White "B" (no jumper), Tropical Khaki or Tropical White uniform. After 1830, Service Dress Khaki (coat optional) and necktie is mandatory for officers; CPOs wear the Working or Service Dress Khaki (coat optional) with necktie mandatory; and the uniform changes to Undress White "A" for other enlisted men.

Service Dress White or Service Dress Khaki (coat optional) with necktie are worn by officers and CPOs at Sunday divine services. Enlisted men wear Undress White "A" with neckerchief. All formal occasions require Service Dress White.

When leaving the limits of the Naval Base and when in nearby Cuban cities, the same uniform is worn as that required after 1830, except that enlisted men must wear neckerchiefs.

As to the number of Service Dress White uniforms, officers and CPOs usually find that four will serve adequately.

All-Navy Cartoon Contest
Neil F. O'Connor, ENS, USN



"Say Mac, mind coming back at 1300?"

Servants—One of the nice luxuries of Guantanamo Bay is the fact that domestic help is available. Maids' salaries range from a minimum of $15.00 a month for an untrained person to a maximum of $35.00 a month (plus board) for experienced help. This may seem low to most Americans; however, these wages are far superior to those received elsewhere in the area. You can expect efficient housecleaning, washing, and ironing, as well as child care. This also includes baby-sitting, as permanent maids are assigned quarters on the base when available. A maid receiving $35.00 per month is also expected to do any, or all of the cooking, if you so desire.

Permanent maids must be hired through the Domestic Servant Office. No other arrangements are permissible.

Base regulations require each domestic employee to have a semi-annual physical examination.

Automobiles—There are approximately 70 miles of passable roads throughout the Naval Base. The distance from one end of the base to the other is nine miles. Although free bus transportation is available between major points, some means of personal transportation is recommended for convenience and an expeditious way of getting around the base. You can either bring your own car, or you can arrange to buy a used car from someone who is leaving the area. There are also quite a few motor scooters around. These too are passed along by departing personnel at reasonable prices.

Owing to climatic conditions, it is not advisable to buy a new car to ship to the base. You will find that your old one, if it is in good running condition, will serve adequately as base transportation. The Naval Exchange garage is equipped to accomplish most repairs. Some spare parts are available locally, but those not obtainable here have to be ordered and shipped from the U.S.

Navymen in pay grade E-4, with four or more years' service, and those in higher pay grades, can ship their cars to Guantanamo Bay at government expense upon application to one of the shipping points. All personnel of lower pay grades must obtain auto entry approval from Commander Naval Base before shipment can be made. Principal automobile shipping points for Guantanamo Bay are Naval Supply Center, Norfolk, Va., and Naval Supply Depot, Bayonne, N. J. Two certified copies of your permanent change of station orders are required with your application (NavSandA Form 322) for shipment. Since there normally is a backlog of cars awaiting shipment at both shipping points, it is advisable to turn yours in at the point of shipment as early as possible.

When the vehicle is delivered to the shipping port, you must have in your possession your registraton card. In the event a lien is held against the automobile, the lien holder's permission should be obtained, authorizing shipment.

Base regulations require every owner of a private motor vehicle to have effective insurance with a minimum coverage for bodily injury of $5/10,000, and public liability and property damage coverage of $5000 before permission is granted to operate the vehicle within base limits. Necessary insurance can be obtained locally. The motor vehicle must also pass a safety inspection before a base license plate can be issued and no motor vehicles will be operated without a base license plate. Each operator of a motor vehicle on the base must also have a base driver's license.

There are six sedans in a "U-Drive It" pool operated by Special Services division of the Naval Station which are available for rental on a first-come basis for periods up to 30 days.

Medical, Dental Facilities — Full medical facilities are available for dependent care. The Naval Hospital is completely equipped for all emergencies and routine care. Obstetrics, gynecology, pediatric and eye-ear-nose-throat clinics are held on a daily basis by appointment. Medical, surgical and dermatological clinics are held weekly by appointment. No house calls are made. Emergency care is available at all times.

Dental care for all dependents is available through a U.S. civilian dentist employed by the Naval Base School Board and maintaining an office on the base. There is a charge for dental treatment with prices comparable to those in the United States. There is no free dental care for dependents.

Currency—U.S. currency is used exclusively. There are no banking facilities at Guantanamo Bay, but checks may be cashed at the Navy Exchange and the Marine Post Exchange. Personal checks are limited to $100.

Exchanges and Commissary—A shopping spree on the base is more likely to be called "making the round of Exchanges," of which there are three (plus associated facilities). The Naval Station exchange offers clothing and shoes for all members of the family, in limited quantity, styles and sizes; household linens, silver plate and sterling articles, notions, jewelry, perfumes, photographic equipment, mahogany products, alligator and Florentine leather products, smokers' needs and candy. A special order department will arrange to obtain any item not carried in stock. The associated facilities are a beauty parlor, barber shop, cobbler, uniform and tailor shop, sporting goods shop, and soda fountain.

The Naval Air Station Exchange specializes in china, electrical appliances of most types, refrigerators, deep freezers, washing machines, hardware, toys, phonograph records, grass rugs, and some duplicate items carried by the Naval Station Exchange. In the same building there is a barber shop, cobbler shop, photo shop, and a soda fountain. Adjoining is a tailor and sewing shop that carries a fair supply of fabrics and sewing materials. Competent seamstresses are available for dressmaking.

The Marine Post Exchange also carries some articles of clothing and shoes, in limited sizes and quantities, refrigerators, deep freezers, washing machines, appliances, photographic equipment, some sports equipment, silverware, and the usual imported items. They also have a tailor and fabric shop, beauty parlor, barber shop, photo shop, cobbler shop, and soda fountain, Special orders can be placed with the Marine Post Exchange.

The Naval Station Commissary Store has an ample supply of packaged foods, baby foods (both infant and junior), household goods, staple items and some personal items. The meat and produce departments are kept supplied periodically by a station craft making trips to Miami. Fresh milk, fruits, vegetables and frozen foods from the States are usually on hand. Prices are somewhat higher than those in Stateside super-markets.

Recreation—Pleasant relief from the semi-tropical heat can be found at the swimming pools and bathing beaches. Windmill Beach, reserved for base personnel and their dependents, is equipped with attractive cabanas for family picnics and barbecue parties which can be reserved upon application to the Special Services department. Phillips Park picnic grounds, excellent for large group parties, has a pavilion with tables and benches, concrete dance floor, softball diamonds, volleyball courts and horseshoe pits. This park is primarily for Fleet personnel, but reservation for its use by base personnel can be obtained when it is available.

Golfers can enjoy an 18-hole course and a newly constructed nine-hole course, a driving range equipped with floodlights and a practice putting green.

Other recreational facilities available are: bowling, tennis, horseback riding, baseball, softball, basketball, bicycling, archery, sailing, boating, hunting and fishing. An outdoor roller-skating rink is also popular. There are two well equipped hobby shops and the station library is well stocked with reading material for all age groups. The outdoor movie theaters at the Naval Station, Naval Air Station and Marine Barracks, and the enclosed theater in the Villamar Housing area, draw a large attendance. The facilities of the Commissioned Officers' Club, CPO club, Petty Officers' Club, and the EM's "White Hat" Club also provide ample opportunity for a good time.

There are frequent chances for base personnel and their families to take recreational cruises to other islands in the Caribbean for a few days of relaxation, sightseeing and shopping.

Religion—The Base Chapel at Guantanamo Bay has a seating capacity of approximately 460 persons and regular services are held there for members of the Protestant, Catholic and Jewish faiths. Christian Science Services are held in the Naval Station Library.

Education—The Naval Base School provides educational facilities from nursery school level through high school. The nursery and kindergarten are self-supporting. Tuition charges are $12 to $15 per month. Children may enter nursery school any time during the school year after they have reached their 3rd birthday. To enter kindergarten a child must be five years old on or before 1 January of the current school year. Those who have reached their sixth birthday on or before 1 January of the current school year are eligible for the public school, which covers the first through twelfth grades and is supported by the Navy Department. There are no tuition charges for Navy dependents entered in the public school. The school is accredited by the Southern Association of Colleges and Secondary Schools. Transportation to and from kindergarten, elementary and high school is provided by the Naval Base at no cost to the pupils. School books and materials are also furnished free to all children.

The school year commences the last week in August and ends the third week in May.

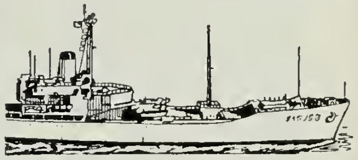
Limitations Set On Wearing PUC Ribbon Bar

Navy and Marine Corps personnel are now entitled to wear the Navy Presidential Unit Citation ribbon bar ONLY if they were serving with a unit during the action for which it was awarded the PUC. Further, unless they are eligible for more than one PUC ribbon, they will no longer wear stars on this award.

Until recently, Navymen and Marines who joined a unit after it was cited were entitled to wear the PUC ribbon bar without star so long as they remained with that unit, while those who were with a unit when it earned the PUC wore the ribbon with star permanently.

The pinpoint precision required for successful launching of long-range guided missiles has brought about a revolutionary new method of navigation for ships.

Regardless of the weather and without the use of any shore aids, it is now possible to fix the exact position of a ship at sea in any latitude by means of a new development called SINS (Ship's Inertial Navigation System).



SINS automatically reports a ship's position, true north and the actual speed the ship is moving over the ocean floor, rather than the less accurate measurement of speed through water.

The Navy's first ship to be equipped with SINS is the 17,600-ton USS *Compass Island* (EAG 153)—a converted merchantman — equipped with activated fins for roll stablization.

A seagoing electronics laboratory, *Compass Island* is capable of automatic photoelectric star tracking and gyroscopic measurement of latitude. She also has a special type of sonar equipment housed in a large, airfoil-shaped dome attached to the bottom of her hull for measuring speed more easily and accurately.

To double-check the accuracy of SINS, *Compass Island* has an ultra-sensitive star tracker, housed in a miniature observatory mounted on a stablized platform atop a 67-ton tower just forward of the superstructure.

Even in daylight, the celestial tracker locates and automatically follows stars invisible to the human eye. SINS is capable of providing navigation data far more accurately than any sextant.

This accuracy is essential in firing long-range missiles, as an error in direction of only one degree in launching will cause a missile to miss a target 1500 miles away by 25 miles.

Not only will SINS assure bull's-eye efficiency in missile launchings but when thoroughly perfected, it will also insure more precise navigation for all ships and greatly improve the accuracy of maps and charts.

Now's the Time to Start Rolling on Your NROTC Application

If you're an enlisted man in the Navy or Marine Corps under 21 years of age, you may have an opportunity to go to college and become a career officer in the Regular Navy or Marine Corps. These opportunities are available to you through the Regular Naval Reserve Officers Training Corps program.

The NROTC program is a yearly opportunity presented to qualified EMs to aid them financially through college. This program is also available to civilians and inactive duty Reservists. If you want to become a career officer in the Navy or Marine Corps, this program provides up to four years of Navy-subsidized education in one of 52 colleges of your choice.

There are approximately 2000 candidates selected each year through this program and of this total, some 200 men are EMs in the Navy and Marine Corps. If you can qualify and are selected, you will be appointed as midshipman in the Naval Reserve and will receive retainer pay at the rate of $50 per month to help you pay your room and board.

While in college you may take any course leading to a baccalaureate or higher degree with the exception of the following: premedicine, medicine, predental, dentistry, preveterinary, veterinary medicine, pretheological, theology, pharmacy, music or art.

You must include 24 semester or equivalent quarter hours of naval science and must complete mathematics through trigonometry and one year of college physics by the end of the sophomore year, and you must show proficiency in English.

You will be required to participate in two cruises and one summer period of amphibious and aviation indoctrination, each of approximately eights weeks' duration.

Enlisted personnel on active duty undergoing instruction in an officer candidate program such as the Naval Aviation Cadet Program (except students enrolled in the Naval Preparatory School) are ineligible to apply for NROTC while retaining their officer candidate status.

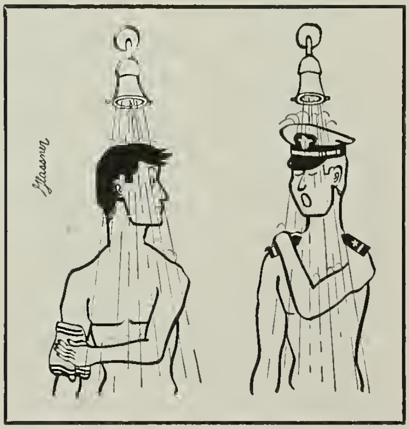
Upon graduation, you are commissioned either as ensign, USN, or as second lieutenant, USMC, and are ordered to active duty for four years. If you apply for and are qualified, you may receive immediate assignment to flight training. Again, you may be commissioned in one of the staff corps of the Navy.

During the third year of active duty, you may request retention as a career officer. Those who apply will be screened, and if selected within the authorized strength established at the time, will continue their careers in the Regular Navy or Marine Corps. Otherwise, their Regular commissions will be terminated and they will be appointed Reserve officers. They will be retained on active duty for a total period of four years, unless sooner released, at which time they may be ordered to inactive duty to fulfill the remainder of their six-year obligation.

If you're still interested, you'll find the eligibility requirements are described in Articles C-1202 and C-1204 of *BuPers Manual.* Once over lightly, they state:

- You must be on an enlistment or extension of an enlistment which will not expire before 1 September of the year in which you will enter college.
- You must have reached your 17th but not your 21st birthday on 1 July of the calendar year in which you wish to enter the program. As you are a member of the naval service, the upper age limit will be waived if you have previous college credits, and if you will not have reached your 25th birthday by 1 July of the year in which you complete four years of college. To establish this waiver, you will have to submit a college transcript.

All-Navy Cartoon Contest
Sheldon Glassner, DMSN, USN



"Say Tim, have you heard that ridiculous rumor which is spreading around the ship . . . They say I'm 'Gung Ho.' "

- You must be a high school graduate or possess the equivalent educational background or high school certificate which would be acceptable for admission to an NROTC college or university.
- You must be a male citizen of the United States.
- You must be unmarried and agree to remain unmarried until commissioned.
- You must be of good moral character, must have the potentiality for leadership and must be recommended by your commanding officer.
- You must pass a physical examination conducted by two medical officers. The final determination of your physical qualifications is subject to review and decision by the Chief, Bureau of Medicine and Surgery and to the approval of the Chief of Naval Personnel.

If you don't have a high school diploma, and are able to pass the USAFI General Education Development Test battery, high-school level, with a minimum standard score of 45 on the five GED tests, or no score below 35 on any one of the five tests, this will be considered as the full equivalent of high school graduation. An important point to remember is that if you will have reached the 21st anniversary of your birth on 1 July of the year in which you are enrolled in the program, you will be ineligible to apply, unless you have previous college experience. You must be able to establish one year of acceptable college credit for each year over 21. In general, 30 semester hours (or 45 quarter hours) of college credit are necessary for each year.

Procedures to be used in nominating qualified enlisted personnel on active duty for participation in the Navy College Aptitude Test are contained in BuPers Inst. 1111.4B. This service-wide examination, which is conducted annually in December, plus your physical examination, is the controlling factor in determining whether or not your application will be given further consideration. Much of the material in the instruction is administrative in nature, but it contains considerable matter of direct interest to you.

It is emphasized that separation from the Regular NROTC for most reasons will mean a concurrent resumption of your previous enlisted status for the remainder of your obligated service.

Nominations are received by the Chief of Naval Personnel from all commands annually, beginning 1 August. *The deadline for this year for receipt of all nominations in the Bureau is 18 October.*

If you're interested in applying for this program, you should take immediate steps to complete requirements and submit your application before the deadline. If you are considered qualified, your commanding officer will receive a copy of your Navy College Aptitude Test before the national test date of 14 December.

If you make a passing score on the examination, it will be published in March. Individual notification will not be sent to those who were unsuccessful in the examination.

Briefly, that's the information available at this time. If you haven't had the official word in your ship or station, check with your personnel officer about it. He will be interested and eager to give you a helping hand.

DIRECTIVES IN BRIEF

This listing is intended to serve only for general information and as an index of current Alnavs and NavActs as well as current BuPers Instructions, BuPers Notices, and SecNav Instructions that apply to most ships and stations. Many instructions and notices are not of general interest and hence will not be carried in this section. Since BuPers Notices are arranged according to their group number and have no consecutive number within the group, their date of issue is included also for identification purposes. Personnel interested in specific directives should consult Alnavs, NavActs, Instructions and Notices for complete details before taking action.

Alnavs apply to all Navy and Marine Corps commands; NavActs apply to all Navy commands; BuPers Instructions and Notices apply to all ships and stations.

Alnavs

No. 24—Announced revision of initial clothing monetary allowances for enlisted personnel.

No. 25—Made public a letter from the Secretary of the Navy to the President of line selection board considering promotion of captain to temporary rank of rear admiral.

No. 26—Announced the convening of selection boards to recommend line officers on active duty (except TARSs) for temporary promotion to the grades of captain and commander.

No. 27—Announced approval by the President of the report of a selection board which recommended officers for temporary promotion to the grade of major general in the Regular Marine Corps.

No. 28—Advised that a desertion conviction cannot be sustained if the only evidence of the intent to desert is the period of absence, regardless of length.

No. 29—Announced approval by the President of the report of a selection board which recommended line officers for temporary promotion to the grade of rear admiral.

Instructions

No. 1001.21A—Advises Naval Reserve and Fleet Reserve enlisted personnel serving on active duty that voluntary recall to active duty is subject to certain restrictions.

No. 1414.2B—Provides general information and instructions for the examination of officers (except captains) selected for promotion.

No. 1414.6—Sets forth a plan for the determination of professional fitness for promotion of warrant officers by means of written examinations or completion of specified courses of instruction instead of examinations.

No. 1500.15B—Outlines the procedures to be followed in the selection of candidates for diving instruction.

No. 1811.1A—Provides information concerning non-disability retire-

WAY BACK WHEN

Fifty-Year-Old Torpedo

In recent years underwater explorers have returned from the deep with some pretty fascinating finds — wine jugs and marble columns from sunken galleys, pieces of eight from ships that once sailed along the Spanish Main and all sorts of relics.

Now, a Navy diver, Monroe M. Bailey, BM2, has also come up with a genuine U. S. Navy relic. He found it during routine diving operations on the torpedo testing range of the Naval Underwater Ordnance Station, Newport, R. I.

There, on the bottom of Narragansett Bay, he spotted an odd-looking metal object with four fins and two propellers. He brought it to the surface, and after a bit of research, it was identified as the tail section of an old Mark Two torpedo.

The Ordnance Station archives revealed that the weapon had been fired and lost on the range in September 1909. Its hiding place had remained a secret ever since.

Further research turned up some background information on the ship which had launched the antiquated weapon. She was the unarmored cruiser, USS *Montgomery*, launched in December 1891 at Baltimore, Md., and placed in commission at Norfolk, Va., in June 1894. During the Spanish-American War *Montgomery* (Cruiser Number Nine) participated in the blockade of Havana, where she joined USS *Indiana* (BB 1) in the capture of two prize vessels, the bark *Frasquito* and the barkentine *Lorenzo*, on 5 May 1898. She also took part in the bombardment of two Spanish forts at San Juan, Puerto Rico, a week later.

Following the war Montgomery served for a while with the South Atlantic Squadron and the Caribbean Division of the North Atlantic Squadron. Then, in 1908 she began a six-year assignment as a torpedo experimental vessel. In that role she launched the "fish" that was lost for almost half a century.

From 1914 to 1918 *Montgomery* was assigned to the Maryland Naval Militia. Then, renamed USS *Anniston*, she rounded out her career with a hitch of World War I escort duty along the Atlantic Coast and in the Caribbean. She was stricken from the Navy list in August 1919 and sold that November — which was quite a few years before Bailey was even born.

ment of officers, warrant officers and enlisted personnel of the Regular Navy.

No. 4642.2B—Announced the continuation of furlough fares to active military personnel traveling within the continental limits of the United States while in a leave status.

No. 5512.2—Describes the identification cards to be issued to USN and USNR personnel on active duty and inactive duty (including retired and Fleet Reserve personnel.

Notices

No. 1610 (29 May)—Announced the distribution and availability of Code of Conduct posters.

No. 1520 (10 June)—Gave notice of the establishment of a program of seminar training in professional subjects for chaplains on active duty.

No. 1531 (13 June)—Stated requirements and procedures for the 1957-58 program for the appointment of Naval Reservists to the U.S. Naval Academy.

No. 1306 (18 June)—Canceled BuPers Inst. 1306.23C and Sup 1 of 12 Apr 1956 concerning assignment of personnel to duty with the Naval Security Group.

No. 1085 (19 June)—Required completion of DD Form 93-1 (Rev. 1 Dec 1956)— Record of Emergency Data—by all members of the naval service.

No. 1560 (19 June)—Listed world affairs films of current interest and importance prepared by the Office of Armed Forces Information and Education.

No. 1742 (19 June)—Informed Navymen of forthcoming elections in the states of Virginia and Wisconsin and invited attention to new Federal Post Card Application for Absentee Ballot Form.

No. 4642 (19 June)—Announced Change No. 2 to BuPers Inst. 4642.2A, which concerns railroad furlough fares.

No. 1700 (25 June)—Informed Navy and Coast Guard personnel of the rules governing the Seventh Inter-Service Photography Contest.

No. 1560 (27 June)—Designated supply points for requisitioning USAFI course material for Information and Education Office library use.

No. 1223 (28 June)—Announced Change No. 4 to BuPers Inst. 1223.1 which activated the rates ACW2, ACR2, ACT2, PRS2, and PRM2 as Selective Emergency Service Rates for USN and TAR personnel.

No. 1418 (28 June)—Announced that ACW3 personnel examined in August 1957 for advancement to pay grade E-5 of the AC rating will be examined for advancement to ACW2.

No. 1700 (8 July)—Announced the Third All-Navy Comic Cartoon Contest.

No. 1223 (9 July)—Announced the establishment of the emergency service rating of Sonarman O (Oceanographer).

No. 1520 (15 July)—Issued Change No. 1 to BuPers Notice 1520 of 25 May 1957, which was concerned with applications for postgraduate educational program.

No. 1416 (16 July)—Announced Change No. 1 to BuPers Inst. 1416.1C, which is concerned with the professional fitness for promotion of officers on active duty.

No. 1910 (16 July)—Invited attention to the provisions and requirements pertaining to the submission of the Notification of Discharge Card (NavPers 599) upon separation of enlisted personnel who are recommended for reenlistment.

No. 1750 (19 July)—Announced Change No. 2 to BuPers Inst. 1750.5A, which is concerned with regulations governing the Uniformed Services Identification and Privilege Card (DD 1173).

No. 1416 (26 July)—Announced servicewide examinations for advancement in rating to selected pay grade E-4 to be conducted in November.

Warrant Officers Are Recommended for Promotion

The names of 1151 USN warrant officers on active duty who were selected for promotion have been announced.

The selections included 1009 temporary promotions and 142 permanent. Recommendations for temporary promotion included 96 to W-2, 305 to W-3 and 608 to W-4. Five were named for permanent promotion to W-3 and 137 to W-4.

Appointments of enlisted men to WO grades have also been made. For these selections see page 9.

SecNav Notice

No. 7220 (25 June)—Defined terms, "[service] member with dependents" and "member without dependents," as used in Joint Travel Regulations on entitlement to station per diem allowances.

List of New Motion Pictures Scheduled for Distribution To Ships and Bases Overseas

The latest list of 16-mm. feature movies available from the Navy Motion Picture Service, Bldg. 311, Naval Base, Brooklyn 1, N.Y., is published here for the convenience of ships and overseas bases. The title of each picture is followed by the program number.

Those in color are designated by (C) and those in wide-screen processes by (WS). Distribution began in July.

These films are leased from the movie industry and distributed free to ships and most overseas activities under the Fleet Motion Picture Plan.

The Brave One (834) (C) (WS): Drama; Michael Ray, Fermin Rivera.

The Lonely Man (835): Drama; Jack Palance, Elaine Aiken.

Hit and Run (836): Drama; Cleo Moore, Hugo Haas.

The Guns of Fort Petticoat (837) (C): Drama; Audie Murphy, Kathryn Grant.

Funny Face (838) (C): Musical Comedy; Fred Astaire, Audrey Hepburn.

Man Afraid (839) (WS): Drama; George Nader, Phyllis Thaxter.

Beast of Hollow Mountain (840) (C) (WS): Adventure-Drama; Guy Madison, Patricia Medina.

Fury at Showdown (841): Drama; John Derek, Carolyn Craig.

Storm Rider (842): Western; Scott Brady, Mala Powers.

The Big Land (843) (C): Action Drama; Alan Ladd, Virginia Mayo.

The King and Four Queens (844) (C) (WS): Drama; Clark Gable, Eleanor Parker.

This Could Be the Night (845) (WS): Comedy-Drama; Jean Simmons, Paul Douglas.

The Big Boodle (846): Drama: Errol Flynn, Rossana Rory.

The Deadly Mantis (847): Science Fiction; Craig Stevens, Alix Talton.

Twelve Angry Men (848):

Drama; Henry Fonda, Lee J. Cobb.

Westward Ho, the Wagons (849) (C) (WS): Adventure Drama; Fess Parker, Kathleen Crowley.

Bachelor Party (850): Drama; Don Murray, E. G. Marshall.

The Buster Keaton Story (851): Drama; Donald O'Connor, Ann Blyth.

Bailout at 43,000 (852): Adventure Drama: John Payne, Karen Steele.

Revolt at Fort Laramie (853): Adventure Drama; John Dehner, Gregg Palmer.

The Oklahoman (854) (C) (WS): Western; Joel McCrea, Barbara Hale.

Accused of Murder (855) (WS): Drama; David Brian, Vera Ralston.

Counterfeit Plan (856): Drama; Zachary Scott, Peggie Castle.

The Tall "T" (857) (C): Western; Randolph Scott, Maureen O'Sullivan.

The Night the World Exploded (858): Science Fiction; William Leslie, Kathryn Grant.

Here's Your Chance To Show Off Your Favorite Snapshots

The Seventh Inter-Service Photo Contest, designed to interest the beginner in photography and to encourage participation in photographic activities, will be held at Bolling Air Force Base in Washington, D.C., on or about 4 Dec 1957. The Air Force is host to this year's contest.

All Naval personnel and Coast Guardsmen on active duty for more than 90 days are eligible to enter the contest. Only photographs which have been taken by the individual contestant after 1 Jan 1956 are eligible for competition. There's no limit to the number of photos you may enter, but you can win only one prize in each class.

There will be three categories of competition—black and white single photographs, black and white picture stories, and color transparencies. Each category will be judged in the novice and experienced class. The novice class will be limited to amateurs whose photographic activities are recreational in nature; while the experienced class includes those who have completed civilian or military formalized courses in photography, worked as or are now assigned as photographers or photographic technicians.

"On the form 'List in order, type of ships preferred,' he wrote, 'Spaceship to the Moon, to Mars, and to Saturn!' "

Here's a breakdown of the three categories of competition:

- ***Category I*** will be for single black and white enlargements. They may vary from a minimum of 8 x 10 inches to a maximum of 16 x 20 inches. All prints must be unmatted and unmounted.

- ***Category II*** will feature a series (from three to seven) 8 x 10 inch black and white pictures which tell a story of one of the phases of the Navy's Special Services program. They must have action, human interest, and be suitable for use in publicity releases.

- ***Category III*** is limited to color transparencies no smaller than 35-mm. For protection, the color transparencies should be mounted on cardboard and submitted in plastic type envelopes or other protective covering. The face of the slide is indicated by placing a red dot in the lower left hand corner.

No tinted or color-tone photographs may be entered in Categories I and II nor will negatives be required.

All black and white entries which reach the level of the Department of the Navy contest will automatically become the property of the Navy and will not be returned. Color transparencies, however, will be returned to the contestants.

QUIZ AWEIGH ANSWERS

QUIZ AWEIGH FOUND ON PAGE 9

1. **(b) George Washington.**
2. **(a) 24-gun *Alfred*.**
3. **(a) USS *Ranger* (CVA 61).**
4. **(a) fifth atomic sub.**
5. **(c) *Talos*.**
6. **(b) USS *Galveston* (CLG 3).**

Only photographs considered suitable for exhibition will be considered. No official U.S. Navy photographs may be entered.

Contestants should submit their photographs to one of the following activities which will hold regional eliminations:

ComFour—activities within the 1st, 3rd, 4th, 6th, 8th and 9th Naval Districts.

ComFive—activities within the 5th, 10th and 15th Naval Districts, Potomac and Severn River Naval Commands, Fleet and shore-based units of the Atlantic Fleet including Atlantic Fleet Units operating under CinCNELM.

ComEleven—activities within the 11th, 12th, 13th and 17th Naval Districts and all Pacific Fleet Units based on the West Coast.

ComFourteen—activities within the 14th Naval District and all activities ashore and afloat in the Hawaiian area and west of the Hawaiian Islands.

Entries from area eliminations must be received by the Commandant Third Naval District no later than 15 Nov 1957. ComThree has been selected to be host again this year for the All-Navy eliminations. A limited number of the winning entries from the regional eliminations will be selected to represent the Navy in the Seventh Inter-Service Photo Contests.

In the All-Navy Contest, appropriate awards will be given to the first, second and third place winners in each category and class. The first three winners in each category and class will also be given prizes in the Inter-Service Contest. In addition, a trophy for the most popular entry, as determined by public ballot, will be awarded at the conclusion of the contest.

The Perpetual Inter-Service photography Contest Trophy will be awarded to the service with the largest number of prize winning entries.

All photos selected for the finals of the Inter-Service Contest will be displayed in the Pentagon during the month of February 1958.

Complete details and rules for the contest are contained in BUPers Notice 1700 of 25 Jun 1957.

This Is What the Naval Postgraduate School Has to Offer You

OPPORTUNITY IS KNOCKING louder than ever for officers who'd like to get in on the Navy's Postgraduate Educational Program, which has been expanded to make more officers eligible for it and to give them a wider choice of curricula. But, if you plan to open the door you'd better do it soon—applications for classes convening in fiscal year 1959 must be submitted by 1 Nov 1957.

This program consists of a variety of curricula, many of which lead to a bachelor or master of science degree, while others merit only a certificate of completion. The Navy's prime facility for conducting and directing the instruction of commissioned officers is the U. S. Naval Postgraduate School, located about one mile east of the city of Monterey, California.

The Naval Postgraduate School consists of three component schools —the *Engineering School,* the *General Line School,* and the *Management School.*

- Engineering curricula are provided through the facilities of the component Engineering School at Monterey and by utilization of civilian institutions known for their leadership in the fields involved.

- The component Management School provides curricula in the general field of management and is responsible for supervision of related curricula such as business administration and personnel administration and training conducted at selected civilian institutions.

- The curriculum of the component General Line School is designed to broaden and enhance the mental outlook and professional knowledge of all career line officers who can be made available by the Chief of Naval Personnel for such training, generally between their fifth to seventh year of commissioned service.

The Naval Postgraduate School has experienced a continuing development program of modernization and expansion in recent years. It was relocated from Annapolis, Md. to Monterey, Calif., in late 1951.

Today PGS provides an educational institution commensurate with the Navy's task of keeping pace with and in the forefront of utilization of the products of scientific research.

Naval Intelligence School

In addition to the preceding, the Superintendent, Naval Postgraduate School, exercises general supervision over the Naval Intelligence School located at the Naval Receiving Station, Washington, D. C. Its location is close to the various intelligence agencies, whose services and files are drawn upon to insure that the instruction presented at the school is as current and pertinent as possible. The curriculum of the Naval Intelligence School, a nine months' course, is devoted to training in all phases of intelligence, including international relations, national security organizations, valuable instruction in allied fields, such as public speaking, photography and methods of research and report writing, and the techniques of intelligence collection, evaluation and dissemination. Intensive instruction in foreign languages follows for certain officers.

Postgraduate instruction in Naval Intelligence is similar to postgraduate education in general for unrestricted line officers—it does not in itself lead to a deviation from a career in the unrestricted line.

Range of Billets

No matter what your officer code designator may be, there are postgraduate curricula available to help you in your career. In a recent training requirement analysis, it was found that hundreds of billets in the Fleet and shore establishment require officer incumbents with a postgraduate education. These billets range from technical and operational billets to billets at the highest administrative and policy making levels. In order to adapt the technical and scientific advances of the era to naval power, it is axiomatic that a number of naval line officers have the formal graduate level education to comprehend these advances and at the same time have the broad naval background necessary to apply them to Fleet operations.

It is a proven fact that postgraduate education can only improve the career outlook of properly motivated and professionally competent line officers. Officers completing postgraduate training and remaining in the line normally will be assigned a minimum of two tours in the field in which they have been educated—these assignments, of course, being consonant with their rotation cycle.

Officers completing a postgraduate curriculum and joining the Restricted Line structure normally will be assigned to billets which will provide a balanced program between specialization and broadening experience in their career fields.

Courses of Study

The length of time the student spends in the program will depend on the curriculum undertaken. Some curricula may be completed in as little as five months, while others may take as long as three years. In general, line officers are ordered to the two-year technical engineering curricula at Monterey. Based on demonstrated academic ability and motivation they may subsequently compete for quotas in the specialized curricula of longer than two years duration.

A change in application and selection procedures for the fiscal year 1959 program has been put into effect, which enables officers to apply for postgraduate training according to seven "Technical Postgraduate Educational Areas." These "areas" are aeronautical engineering, civil engineering, management and administration, naval engineering, operations, ordnance engineering and "special" (a category which takes in subjects not covered by other areas).

Under the new procedures an officer applying for the program indicates the area in which he would prefer to study. Then, in order of preference, he lists all curricula in that area in which he is interested and for which he is eligible.

If he likes, he may also indicate a second choice area, but in it he may only apply for one specific curriculum, and he will not be considered for that curriculum until all selection possibilities have been exhausted in the area he has listed as his first choice.

Certain curricula under the "naval engineering area" are designed and intended to qualify Line officers for transfer to the Restricted Line in the ED (1400) category.

Line officer applicants for the naval construction and engineering and the advanced nuclear engineering curricula will automatically be redesignated "Restricted Line" officers in the ED (1400) category upon completion of their studies.

Line officers applying for the chemical engineering (fuels and lubricants) and the electrical engineering curricula must submit, along with their applications, a statement of their intent to request transfer to Engineering Duty. And, a similar statement of intent is required of Line officers, enrolled in the engineering electronics, engineering materials or mechanical engineering (advanced and gas turbines) curricula, during or upon completion of the first year of study. In these cases, formal application and selection for transfer will be made later on in accordance with BuPers directives.

Eligibility Requirements

Specific eligibility requirements as to code designator, grade, operational experience and academic prerequisites for the various curricula are given in detail in BuPers Notice 1520 of May 1957, subject to modifications of BuPers Notice 1520 of 15 Jul 1957. The following stipulations apply to the grade requirements:

For curricula in the areas of aeronautical, naval (except naval construction and engineering), ordnance or civil engineering (except the basic course of study in civil engineering), applicants must have been originally commissioned on or before 30 Jun 1953, and in most cases, must be below the rank of LCDR. However, in some instances, LCDRs with date of rank of 1 Jan 1957 or later are eligible. Naval Academy graduates, classes 1955 and 1956 are eligible for the basic civil engineering curriculum. For the naval construction and engineering curriculum, applicants must have an original date of first commission effective during the period 1 Jan 1953—31 Dec 1955.

For courses of study in the management and administration, operations (except aerology) and "special" areas, applicants must have an original date of first commission on or before 30 Jun 1953 and may be up to, and in some cases in the grade of CDR. USNR ensigns may apply for aerology curricula.

Regular Navy LDOs may submit applications provided that the field of study requested is appropriate to the officer's specialty and that he has the same academic prerequisites required of other applicants.

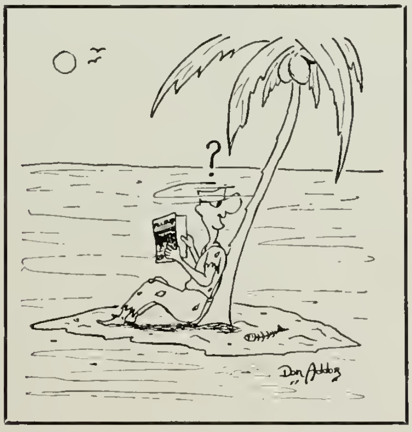
Submarine officers applying for the postgraduate program (except the naval construction and engineering curriculum) must have at least three years' operational experience in submarines as of 1 Jul 1958. Those applying for naval construction and engineering need only be qualified in submarines by the time they begin their studies.

Naval aviator applicants who entered flight training after their first year of commissioned service must have at least two years of operational flight experience with Fleet squadrons as of 1 Jul 1958. If they entered flight training during their first year of commissioned service, they must have three years' operational experience (including flight training) as of that date.

Officers who have already completed postgraduate work are not eligible for the Postgraduate Program, except for the curricula in civil engineering (advanced), comptrollership, management and industrial engineering, metallurgy (special), naval architecture (advanced hydrodynamics), Navy middle management and nuclear engineering (advanced). Completion of the General Line School (even though it comes under the Postgraduate Program) does not prevent an officer from receiving further postgraduate education.

Refresher Math Course

For officers who hope to attend the Engineering School, a special refresher course in mathematics, developed by the Postgraduate School staff, is available and recommended. Once you complete it you may also obtain refresher courses in mechanics and physics.



"REMEMBER! There are nine other Navymen waiting to read ALL HANDS."

To get this material you may specifically request it as part of your application for postgraduate training, or you may submit a separate request direct to the Superintendent, U. S. Naval Postgraduate School, Monterey, Calif.

How to Apply

If you want to take advantage of the opportunity offered by the Postgraduate Program, check the most recent BuPers Notice of the 1520 series for a complete list of curricula to find out what you're eligible to take and to get the complete details on application procedures. Then, if you qualify, submit the original and two copies of your application, via official channels, to the Chief of Naval Personnel (Attn: Pers-B1136).

The application should include (in this order): a statement of the first choice area and the curricula under it in which you're interested and for which you're qualified; a second choice area if desired; a statement certifying your eligibility as to code designator and grade; a brief resume of your academic background; a statement of security clearance held (otherwise your CO's endorsement should contain a statement of clearance eligibility); in the case of submarine officers and Naval aviators a statement showing that you have the required operational experience; in the case of Line officers applying for the naval construction and engineering or the advanced nuclear engineering curricula, a request for change of designator to Engineering Duty (1400); in the case of Line officers applying for the chemical engineering (fuels and lubricants) or the electrical engineering curricula, a statement of intent ultimately to request transfer to Engineering Duty; an obligated service agreement as prescribed in BuPers Notice 1520; and (if you wish) a statement requesting refresher course material.

A single selection board, scheduled to meet in January 1958, will review all applications for postgraduate instruction and select all the candidates for it. (For some postgraduate curricula direct applications are not desired—see the latest BuPers Notices in the 1520 series for details on these).

Roundup on Latest Per Diem Allowances at Overseas Stations

In response to letters and calls to ALL HANDS requesting information on per diem allowances at overseas duty stations, the following chart, based on information in *Joint Travel Regulations*, Change 61, has been prepared.

The chart shows station per diem allowances for personnel permanently assigned to duty at any naval activity in any of the countries or localities shown. These allowances are payable to personnel without dependents when government quarters and/or messing facilities are not available, and to personnel with dependents residing at or in the vicinity of their permanent duty stations when government quarters and/or messing are not available for their dependents. Generally these allowances are in addition to any other basic allowances for subsistence and quarters to which a member may be entitled.

It should be remembered that the figures given here are subject to periodic change, either going up or down depending upon living costs in the country at the time.

Where "none" is indicated it usually means that the cost of living in the country is less for the category of personnel shown than it is in the U. S. for the same category.

When ordered to either overseas duty or temporary duty it is advisable to check *Joint Travel Regulations* for the up-to-the-minute figures.

OVERSEAS STATION PER DIEM ALLOWANCES	WITHOUT DEPENDENTS				WITH DEPENDENTS			
	Enlisted		Officer		Enlisted		Officer	
Country or locality	Subsistence	Quarters	Subsistence	Quarters	Subsistence	Quarters	Subsistence	Quarters
For all countries or places outside continental United States not in this table	None	None	None	None	None	None	None	None
Afghanistan	$0.30	None	$0.40	None	$3.35	None	$3.35	None
Alaska:								
1st Judicial Division	1.15	$0.65	1.20	$1.15	3.00	$1.05	3.00	$1.45
2nd Judicial Division	2.50	1.00	2.50	1.75	3.00	2.50	3.00	2.60
3rd Judicial Division	1.15	.90	1.20	1.60				
Members occupying housing in Aleutian Homes Housing Project located at Kodiak					1.35	3.00	1.35	3.20
Other					1.35	1.75	1.35	2.00
4th Judicial Division (except the following)	1.15	1.10	1.20	1.35	1.35	2.10	1.35	2.40
All that territory west of 150° west longitude and all that territory north of 65° 30′ north latitude	2.50	1.00	2.50	1.75	3.00	2.50	3.00	2.60
Algeria	None	None	2.90	2.30	None	None	3.65	3.35
Antigua, B. W. I.	1.00	.30	1.00	.30	1.20	.30	2.30	.30
Argentina	.70	.80	.75	1.40	1.50	1.50	1.50	1.70
Australia (except the following)	1.00	1.15	1.00	2.00	2.10	1.85	2.85	2.50
Alice Springs	1.00	None	1.00	None	3.50	1.00	3.50	1.00
Austria (except the following)	.50	None	.50	None	3.80	None	3.80	None
Vienna	.50	.75	.50	.75	3.80	1.45	3.80	2.00
Bahama Islands, B. W. I. (only the following):								
Eleuthera Island	1.00	.40	1.00	.40	1.15	1.00	1.60	1.35
Nassau, New Providence Island	4.25	2.55	5.15	4.50	4.80	4.15	6.55	5.70
Bahrein Islands, Persian Gulf (only the following):								
Manama	2.25	3.00	2.75	3.00	3.00	4.50	3.45	4.50
Awali	1.25	.50	1.25	.50	3.00	1.15	3.45	1.15
Belgium	2.30	1.05	2.30	1.05	3.85	1.70	5.30	2.30
Bermuda	None	None	None	None	1.00	.70	1.35	1.00
Bolivia	.80	None	1.00	None	.90	None	1.25	None
Brazil (except the following)	1.50	.50	1.50	.50	2.60	.50	3.70	.50
Rio de Janeiro	2.00	.55	2.45	.55	3.00	1.00	4.10	1.75
Sao Paulo	2.00	.55	2.45	.55	3.00	1.00	4.10	1.75
Bulgaria	1.50	1.85	1.60	3.25	1.75	3.50	2.40	4.00
Burma	2.25	1.00	2.75	1.00	4.90	2.35	4.90	2.35
Cambodia:								
MAAG Personnel	2.00	1.35	2.00	2.40	2.90	2.25	4.00	3.05
Other Personnel	1.00	1.35	1.00	2.40	1.45	2.25	2.00	3.05

OVERSEAS STATION PER DIEM ALLOWANCES	WITHOUT DEPENDENTS				WITH DEPENDENTS			
Country or locality	Enlisted		Officer		Enlisted		Officer	
	Subsistence	Quarters	Subsistence	Quarters	Subsistence	Quarters	Subsistence	Quarters
Canada (except the following)	.50	None	1.00	None	1.65	.35[1]	2.25	.45[1]
Fort Churchill, Manitoba					2.70	None	2.70	None
Halifax, Nova Scotia					1.65	.65[1]	2.25	.90[1]
Newfoundland (except the following)	None	None	None	None	1.20	None	1.20	None
Argentia					1.20	None	1.20	1.20[1]
St. Johns					1.20	.90[1]	1.20	1.20[1]
Stephenville					1.20	.60[1]	1.20	None
Ottawa, Ontario	.50	.80	1.00	1.20	2.00	1.30[1]	2.75	1.75[1]
Toronto, Ontario	.50	.80	1.00	1.20	2.00	1.30[1]	2.75	1.75[1]
Canton Island	2.25	1.15	2.35	2.00	2.65	2.20	3.60	2.50
Ceylon	2.45	.55	3.00	.95	2.75	.90	3.80	1.20
Chile (except the following)	1.50	None	1.90	None	1.75	None	2.40	None
Antofagasta	.90	None	1.10	None	1.05	.25	1.40	.30
Santiago	1.50	.65	1.90	1.10	1.75	2.20	2.40	3.00
Valparaiso	1.50	.65	1.90	1.10	1.75	1.00	2.40	2.00
Colombia	1.65	.60	2.00	.60	2.10	1.10	2.85	2.20
Costa Rica	2.00	.25	2.15	.50	2.40	1.25	2.40	1.25
Cuba (except the following)	.40	None	.45	None	.45	None	.60	None
Havana:								
Accredited Mission Personnel	None	None	None	None	.55	.25	.90	.40
Other personnel	3.60	1.10	4.40	1.95	4.05	1.80	5.55	2.45
Cyprus	.30	1.15	.30	2.00	.35	2.20	.50	2.50
Czechoslovakia	3.95	2.65	6.25	4.65	5.40	5.05	7.90	5.75
Denmark	1.65	.50	1.65	.50	4.00	.80	5.45	1.90
Dominican Republic:	1.00	.90	1.00	1.60				
Accredited Mission Personnel					1.45	.65	.70	.35
Other personnel					4.40	2.00	4.40	2.35
Ecuador:								
Accredited Mission Personnel	None	None	None	None	None	None	None	None
Other personnel	1.20	.45	1.25	.75	1.40	.85	1.90	.95
Egypt	2.00	.65	2.45	1.15	2.25	1.05	3.10	1.45
El Salvador:	1.30	.70	1.60	1.20				
Accredited Mission Personnel					.95	.85	.95	.60
Other personnel					3.20	2.90	4.35	2.90
Eritrea	.50	None	.50	None	1.10	None	1.10	None
Ethiopia	1.40	1.70	1.75	1.70	4.00	4.25	5.40	4.25
Finland	2.60	.25	2.60	.25	3.75	.25	4.35	.75
France (except the following)	.45	None	.45	None	2.00	.60	2.70	.80
Alpes Maritimes Dept.	1.70	None	1.70	None	2.25	.75	3.00	1.75
Eure Dept.					2.00	.75	2.70	1.75
Eure et Loire Dept.					2.00	.75	2.70	1.75
Loiret Dept.					2.00	.75	2.70	1.75
Seine et Marne Dept.	.70	.60	.85	1.10	2.25	2.45	3.00	3.75
Seine Dept.	1.70	.80[2]	1.70	1.45[2]	2.25	2.90[2]	3.00	4.00[2]
Seine et Oise Dept.	1.70	.80[2]	1.70	1.45[2]	2.25	2.90[2]	3.00	4.00[2]
Ghana	2.25	.70	2.35	1.20	2.65	1.30	3.60	1.50
Great Britain (including Northern Ireland) except	None	None	None	None	1.20	None	1.60	None
Blackbushe-Camberly Area	.50	.45[3]	.60	.75[3]	1.30	.70[3]	1.80	.95[3]
London (including Metropolitan Traffic Area)	1.25	1.00[3]	1.25	1.00[3]	2.00	1.50[3]	2.55	2.05[3]
Manston	.50	.45[3]	.60	.75[3]	1.30	.70[3]	1.80	.95[3]
Greece	1.30	.90	1.60	.90	2.90	1.40	2.90	1.80
Guadalcanal Island	2.25	1.15	2.35	2.00	2.65	2.20	3.60	2.50
Guatemala:	.50	.50	.60	.90				
Accredited Mission Personnel					.80	.45	None	None
Other					3.70	1.95	3.70	1.95
Haiti:	1.45	.90	1.45	1.60				
Accredited Mission Personnel					.50	.30	None	None
Other Personnel					3.30	1.90	3.30	2.60
Honduras:	.90	1.25	.90	1.25				
Accredited Mission Personnel					.40	.50	.35	.30
Other Personnel					2.25	2.70	3.10	2.95

OVERSEAS STATION PER DIEM ALLOWANCES	WITHOUT DEPENDENTS				WITH DEPENDENTS			
Country or locality	Enlisted		Officer		Enlisted		Officer	
	Subsistence	Quarters	Subsistence	Quarters	Subsistence	Quarters	Subsistence	Quarters
Hong Kong, B. C. C.	1.00	2.45	1.00	2.45	3.55	4.80	3.55	4.80
Hungary	2.25	None	2.70	None	2.50	None	3.40	None
Iceland (except the following)	None	None	None	None	None	None	None	None
Reykjavik	1.05	None	1.05	None	1.05	None	1.05	None
India	1.20	None	1.45	None	2.00	1.80	2.75	2.45
Indonesia	.45	None	.55	None	.50	None	.70	None
Iran	2.65	1.55	2.75	2.70	3.10	2.95	4.20	3.35
Iraq	2.50	2.35	2.65	4.20	5.10	3.85	7.00	5.00
Ireland	.40	.25	.50	.50	2.95	.75	4.00	1.00
Israel (except Jerusalem)	2.10	.80	4.50	1.40	5.60	1.30	6.80	1.75
Italy (except the following)	.85	.50	.85	.50	2.15	.50	2.20	.50
Civitavecchia	1.00	.55	1.50	1.00	3.80	1.40	3.80	2.80
Naples					2.15	.50	2.20	1.05
Rome	1.00	.55	1.50	1.00	3.80	1.40	3.80	2.80
Jerusalem	2.10	.80	4.50	1.40	5.60	1.30	6.80	1.75
Jordan (except Jerusalem)	1.95	1.40	2.35	2.50	2.20	2.30	3.00	3.15
Laos	2.00	1.35	2.40	2.40	2.25	2.25	3.15	3.05
Lebanon	1.60	.60	1.65	1.05	3.50	1.15	3.50	1.30
Liberia (except the following)	.75	.45	.80	.80	.90	.90	1.20	1.00
Monrovia	3.00	.80	3.15	1.40	3.50	1.55	4.75	1.75
Libya	.85	.50	.85	.50	2.00	1.10	2.70	1.10
Luxembourg	.30	1.15	.30	2.00	.35	2.20	.50	2.50
Malayan Union (except the following)	2.25	.70	2.35	1.20	2.65	1.30	3.60	1.50
Singapore	2.25	1.85	2.35	3.25	2.65	3.50	3.60	4.00
Malta	1.00	None	1.00	None	1.50	None	2.10	None
Mexico	1.45	None	1.70	None	1.65	None	2.25	None
Morocco (except the following)	.80	.50	1.00	.50	2.00	.65	2.75	.85
Ben Guerir, Casablanca, Marrakech, Nouasseur, Rabat, Sale, Tangier					2.00	1.00	2.75	1.35
Members occupying housing constructed under Rental Guarantee Housing Program:[4]								
Nouasseur Air Base Project					2.00	1.85	2.75	.80
Ben Guerir Air Base Project					2.00	2.00	2.75	1.25
Sidi Slimane Air Base Project					2.00	1.65	2.75	.85
Netherlands (except the following)	.80	.35	.80	.35	2.45	.50	3.35	.70
The Hague	1.10	.35	1.10	.35	2.90	.50	3.90	.70
Netherlands West Indies (only the following):								
Aruba	1.30	None	1.55	None	3.65	None	5.00	None
Nicaragua	.75	.50	.75	.50	2.05	1.45	2.80	1.45
Nigeria	2.25	.70	2.35	1.20	2.65	1.30	3.60	1.50
Norway	1.85	.50	2.40	.85	3.20	.90	4.30	1.50
Pakistan	1.60	.80	1.95	1.40	3.00	1.50	4.10	1.70
Panama (Aguadulce only)	.30	1.15	.30	2.00	.35	2.20	.50	2.50
Paraguay	1.05	.60	1.10	1.00	1.20	1.10	1.65	1.25
Peru	1.25	.40	2.00	.40	3.00	1.45	4.10	2.00
Philippines (except the following)	None	None	None	None	.80	None	1.10	None
Rizal Province (including Manila and Quezon City)	1.00	None	1.00	None	1.45	1.40	2.00	1.90
Poland	1.70	None	1.70	None	2.15	None	2.95	None
Portugal	.50	.95	.50	1.65	2.80	1.50	3.85	2.10
Puerto Rico	None	None	None	None	.80	None	1.10	None
Rumania	3.75	1.40	3.95	2.45	4.40	2.65	10.00	7.00
Saudi Arabia:								
Accredited Mission Personnel	.80	None	.80	None	1.90	None	2.10	None
Other Personnel	.80	.80	.80	1.40	1.90	1.55	2.10	1.75
Sierra Leone	2.25	.70	2.35	1.20	2.65	1.30	3.60	1.50
Spain (except the following)	.65	None	.65	None	1.65	.35	2.30	.50
Madrid	.65	.30	.65	.55	1.65	1.60	2.30	2.25
Villatobas	.65	.30	.65	.55	1.65	1.60	2.30	2.25
Surinam	.75	.35	.80	.60	.90	.65	1.20	.75
Sweden	1.00	.50	1.20	.50	2.90	1.60	4.00	2.20
Switzerland	2.75	1.40	2.90	2.45	3.20	2.65	4.40	3.00

OVERSEAS STATION PER DIEM ALLOWANCES	WITHOUT DEPENDENTS				WITH DEPENDENTS			
	Enlisted		Officer		Enlisted		Officer	
Country or locality	Subsistence	Quarters	Subsistence	Quarters	Subsistence	Quarters	Subsistence	Quarters
Syria	1.05	1.05	1.30	1.85	3.05	1.70	4.15	2.30
Tahiti (French Oceania)	1.90	None	2.00	None	2.20	None	3.00	None
Taiwan	.35	None	.55	None	2.40	.75	3.30	.75
Thailand	.90	.40	1.10	.70	2.45	2.90	3.35	3.80
Trieste	1.05	None	1.25	None	1.15	None	1.60	None
Trinidad, B. W. I.	1.05	None	1.25	None	1.15	None	1.60	None
Tunisia	.75	.45	.80	.80	.90	.90	1.20	1.00
Turkey	.80	None	.95	None	1.50	None	2.05	None
Union of South Africa	2.10	.45	2.55	.75	2.35	1.40	3.25	1.40
Union of Soviet Socialist Republics	6.00	1.85	7.30	3.25	6.70	3.50	9.20	4.00
Uruguay (except the following)	1.80	1.55	2.15	2.75	2.00	3.35	2.75	4.15
Accredited Mission Personnel					.45	.85	.60	.90
Venezuela:								
Accredited Mission Personnel	None	None	.40	.20	4.15	3.15	5.65	4.10
Other personnel	4.05	1.80	6.50	2.60	7.80	5.90	10.70	7.60
Vietnam (except the following)	.40	None	.40	None	4.00	None	4.00	None
Saigon and Cholon	.40	1.50	.40	1.50	4.00	4.00	4.00	5.50
Virgin Islands of the U. S.	1.05	None	1.10	None	1.20	None	1.65	None
Yugoslavia	2.60	None	2.60	None	3.10	None	4.15	None

[1] No station per diem allowances for quarters will be paid to members who occupy quarters furnished by the Canadian government even though a rental charge is assessed for the occupancy of such quarters.

[2] No overseas station per diem allowances for quarters are payable to members residing in "SHAPE Village," "SHAPE Bachelor Officers' Quarters," "Fontainebleau Village Apartments," or "Fontainebleau International Bachelor Officers' Quarters."

[3] No station per diem allowances for quarters will be paid to members who occupy quarters furnished by the British government even though a rental charge is assessed for the occupancy of such quarters.

[4] These rates are payable to members occupying this housing regardless of the location of their duty station.

Duty with FAWTUPac

The Navy's Air Defense Division of the Fleet All Weather Training Unit, Pacific (FAWTUPac), is rounding out its second year with the Continental Air Defense Command.

The men and aircraft of FAWTUPac stand 'round-the-clock alert at the Naval Air Station, at North Island, San Diego, Calif., ready to intercept any unidentified aircraft off southern California.

FAWTUPac duty is typical of interceptor commands. Pilots stand by in full flight gear to scramble and engage possible enemy aircraft, and can be airborne within three minutes after receiving a warning from radar sites which are key links in the CONAD system. (See ALL HANDS, September, 1956, for details.)

One group of pilots and enlisted men relieves another for a 24-hour tour, and another day begins. Pilots and crews check the status board in the ready room to determine whether they are on a five-minute or 60-minute alert; flight line crews and plane captains inspect the aircraft and make sure they are fueled and in momentary readiness for flight; ordnancemen check the plane's weapons and ammunition, and maintenance crews are busy in the hangars readying other aircraft to be moved onto the flight line when needed.

Meanwhile, in the officers' and enlisted men's lounges, which also serve as ready rooms, men in flight suits wearing bright yellow Mae West jackets start the never-ending wait that is the lot of the Air Defense Division.

But the wait, constant though it may be, is usually not long, for alert scrambles, both real and practice, are numerous. Every unidentified aircraft in the area covered by FAWTUPac, extending from lower California almost to Los Angeles, must be checked out whether it be an airliner, private airplane or other military aircraft which may have strayed from its intended course.

Training films, lectures, briefing sessions and training flights are all part of the preparedness program and must be worked in between alerts.

Part of their leisure time is spent in reading magazines or books, watching television or playing acey-deucy in the lounge. Physical recreation includes badminton and volleyball.

All of these activities stop instantly when the alert horn sounds and the men race to the aircraft.

Pilots and radar operators man the aircraft, ground crews start the ground compressor units that fire off the jet engines, wheel chocks are pulled and aircraft taxi to take-off positions.

Within three minutes after the scramble signal is received they are airborne. The single-place F4D *Skyrays,* which are the Navy's fastest interceptors, can be 10,000 feet over their base within less than a minute from the time they take off.

Only slightly less speedy, the two-place F3D *Skyknights,* whose flight endurance has been a mainstay of the Navy's air force, are off after the unidentified quarry, too.

So far every alert has resulted in the interception of "friendly aircraft" but the men take to the air with the thought that "this may be it."

BOOKS: SOMETHING OF EVERYTHING IN THIS MONTH'S SELECTION

THERE'S A LITTLE BIT of everything in the books selected by the Library Services Branch for review this month — aviation, espionage, naval history and a novel about the western frontier a century ago. If that isn't enough variety for you, you'll find an even wider range of subjects on the shelves of your ship or station library.

For the air-minded, there are two selections this month—***They Fought for the Sky:*** *The Dramatic Story of the First War in the Air,* by Quentin Reynolds, and ***The Sound of Wings:*** *Readings for the Air Age,* Edited by J. B. Roberts and P. L. Briand.

They Fought for the Sky is the story of the flyers and planes of World War I, when German and Allied airmen duelled each other in aerial combat reminiscent of the Age of Chivalry, then dropped wreaths and messages of condolence behind the lines to honor their fallen foes.

NOW HERE'S THIS

Fifth Annual Crawl

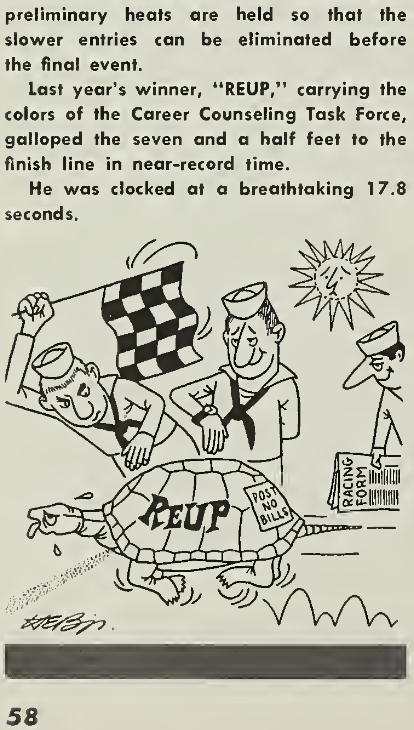
The tumult and the shouting have died, the records have all gone into the books and the turtles have all gone back into their shells. The 1957 Turtle Derby at the Naval Training Center, Bainbridge, Md., is history.

At Bainbridge, the Churchill Downs of the turtle world, the Derby is an event of such magnitude that it was necessary to set up a special Turtle Derby Racing Commission. This year during the fifth annual crawl, activities from all over the Center sponsored their entries.

The race is held in a 15-foot circle. Turtles are placed in a starting gate in the center of the circle and the first one to reach its perimeter is the winner. Several preliminary heats are held so that the slower entries can be eliminated before the final event.

Last year's winner, "REUP," carrying the colors of the Career Counseling Task Force, galloped the seven and a half feet to the finish line in near-record time.

He was clocked at a breathtaking 17.8 seconds.



In these pages there are colorful figures like Georges Guynemer, a French pilot who was credited with 53 German planes and mourned by almost all of France when he crashed in 1917; Baron von Richthofen, the German hero who flew in a blood-red Fokker and destroyed 76 Allied planes before he was shot down; Rene Fonck, of France, who downed 75 German aircraft in two years while his own plane was only hit once by an enemy bullet; and of course, Eddie Rickenbacker, Frank Luke and other American aces.

The Sound of Wings is a unique collection of memorable prose and poetry by the world's great writers, capturing the exhilarating experience of flight and tracing its history from man's first dreams of being airborne to his experiments with the rocket.

In this anthology, you'll find Ovid's "The Fall of Icarus" and Samuel Johnson's "Dissertation on the Art of Flying," which recall early ages when man admired the effortless grace of the eagle and built fantasies about the possibilities of flight.

Here also is Alfred, Lord Tennyson's "Prophecy," written before the Wright brothers first flew into history, but predicting the air armadas of today; John Townsend Trowbridge's "Darius Green and His Flying-Machine," which reflects the humor and optimism of man trying with mechanical wings to imitate the birds; and Joseph Conrad's "Flight," a perceptive, realistic description of a first flight. The writings of Anne Morrow Lindbergh and Antoine Saint-Exupery explore the beauty and solitude of flying. "2nd Air Force," by Randall Jarrell, and "Gunner's Passage," by Irwin Shaw, dramatize the air raids of World War II. "Carrier Landing," by James Michener, tells how it felt to fly a Navy jet in the Korean war. And, in "Rocket Shoot at White Sands," Jonathan Norton Leonard looks into the tomorrow of the air age.

If you're not the type to get all up in the air over aviation, maybe the book for you is ***Secret Servants:*** *A History of Japanese Espionage,* by Ronald Seth. In it, the author shows how Japan copied Western methods of spying when she cast off her isolation during the latter half of the nineteenth century, using the German system as a model and the master spy, Wilhelm Stieber, as a teacher. From there, he traces Japan's espionage operations up to World War II, telling of the founding of the Black Ocean Secret Society, Japanese agents in Hawaii as early as 1876, the crucial role espionage played in the Russo-Japanese war of 1904-05 and the penetration of the United States and South and Central America by Japanese spies long before Pearl Harbor. In covering all this (and much more) Mr. Seth reveals many interesting facts.

The naval history in this month's selection is ***The Italian Navy in World War II,*** by CDR Marc' Antonio Bragadin of the Italian navy. This book, which has already gone through four Italian printings, is the most complete and authoritative work published to date on what Italy's navy did in the war. Its account of Italian activities in the Black Sea and Mediterranean between 1939 and '45 gives a close-up, sharp-focus picture of this phase of the war which was not previously available in the English language. It also supplies many missing details and corrects a number of misconceptions.

Completing this month's roundup of books is ***Pillar of Cloud,*** by Jackson Burgess. This novel is the story of young Garvin Cooper, who came west to Whitaker, Kansas Territory, in 1858.

Fired by tales of the riches of the Rocky Mountain country, Cooper and his chance-met friend, Bob McVey, join an inadequate little party of trailbreakers under the leadership of Ned Drum, who is fanatically determined to prove that there is a new and practical way across the plains. At first all goes well, but then come creeping doubts and a growing hatred between Drum and McVey, and the members of the party begin to wonder if Drum is leading them to their doom.

In this book the hostility of nature and Indians and the hopes, fears, dangers, weaknesses and strengths of the people who conquered them begin to come alive.

NAVAL AVIATOR NO. 608

From the first days of his naval career, as a World War I pilot and early trans-ocean flier, through the years when he became the first man to fly over the North and South Poles, Richard E. Byrd was a pioneer in the true Navy tradition.

On his Antarctic expeditions, Admiral Byrd was responsible for the charting of approximately two million square miles of the earth's surface previously unseen by man in recorded history. His active interest in the South Pole region spanned thirty years.

His first fame in polar exploration was gained in the opposite end of the globe from that which occupied his attention in more recent years. In 1925 he commanded a naval aviation unit which accompanied an expedition to the Arctic. A year later came his famed flight over the North Pole and in 1927, with three companions, he completed his transatlantic flight.

On his first major Antarctic expedition, more than 400,000 square miles of territory were mapped and on 29 Nov 1929, he flew over the South Pole. These exploits brought him the rank of rear admiral by special act of Congress. He was then 41 years old.

Three years later, on his second expedition, he nearly lost his life. For five months during the Antarctic winter he lived alone in an ice-buried shack 125 miles from the expedition's base at Little America. Overcome by carbon monoxide from a faulty stove he became too weak to turn the crank of the hand generator of his radio set, and was only rescued by his anxious companions by a narrow margin.

Extensive air and coastal surveys were carried out on the third Byrd expedition from 1939 to 1941. Further discoveries were made in the big 1947 expedition which engaged 13 ships and more than 4000 men as a Navy project.

A little more than a year ago, Admiral Byrd was back in the Antarctic again, on his fifth expedition and, until a few months before his death, had planned to return once more in his capacity as officer in charge of the U. S. Antarctic investigations.

On 11 March of this year he died at his home in Boston, Mass., after an illness of several months. His death was attributed to a heart ailment brought on by overwork in connection with his many activities. He was 68 years old.

During his lifetime, numerous colleges and universities had conferred honorary degrees on RADM Byrd and he had received a large number of medals, including the Medal of Honor, Navy Cross, Navy Distinguished Service Medal, Legion of Merit, and Distinguished Flying Cross.

THE NAVAL CAREER of Richard E. Byrd almost came to an end at its very start. A three-time broken leg forced him into retirement just four years after he was graduated from the Naval Academy as an Ensign, USN.

At Annapolis (1908-1912) he had played football and was captain of the gymnastic team. The first two injuries occurred during participation in these sports, and the third resulted from a shipboard accident, while serving in USS *Wyoming,* leaving his leg in such a weakened condition that he was unable to stand for extended periods. He was retired for physical disability in 1916.

His second chance at a naval career, however, was made possible some months later when he was recalled to active duty limited to service other than standing long watches at sea.

This handicap did not prevent him from distinguishing himself in his early career. Before his disability retirement, while serving in USS *Washington,* on two occasions he had been cited for rescuing men from drowning. After returning to active duty, during World War I, he was cited four times for bravery. By 1919 he had received 17 citations.

FAMED FLIGHT — While on 1925 expedition into the unknown Arctic Byrd became first to fly over the North Pole.

In 1917 Byrd was assigned to the Naval Aeronautic Station, Pensacola, Fla., for aviation training—an event which was to change his future career. He was to be a Navy airman the rest of his life.

"From the moment I became a full-fledged Navy pilot," said Admiral Byrd later, "my ambition was to make a career in aviation. Not merely in the sense of routine flying, but rather in the pioneering sense."

While at Pensacola, he became interested in a new flying boat under construction. It was the NC-1. At this time, Byrd, now LTJG and Naval Aviator No. 608, conceived the idea of flying it across the ocean to be delivered to the Navy for patrol work.

After the armistice, he spent a tour of duty in the Aviation Division of the office of Naval Operations, then in the office of the Director of Naval Aviation, Bureau of Navigation. In early 1919 he progressed one step nearer his goal when he participated in the navigational preparation for the trans-Atlantic flights of the NC planes. Byrd flew as far as Trepassey, Newfoundland, as part of the crew of NC-3, where the plane developed propeller trouble. (One of the other planes made the historic trans-ocean voyage successfully. See All Hands, p. 59, October 1955.)

Aerial navigation had earlier attracted LCDR Byrd and the flight of the NC boats was to be a test of a group of instruments developed by him. They included the bubble sextant for obtaining an artificial horizon and calculating position in flight, the sun compass, which served as a check upon and a substitute for the magnetic compass, and the drift indicator, for measuring departure from course. With modifications, the sextant and indicator introduced by Byrd are still in use by the armed services.

Following the flight of the NC-4, he was assigned to work on a proposed flight of the rigid dirigible *Shenandoah* over the North Pole in 1924. The flight was to start in Alaska and end in Spitsbergen, on the other side of the Canadian Arctic. This project was discontinued, and shortly after *Shenandoah* was lost during a violent thunderstorm.

For some years Byrd was, as he described it, "marooned" in Washington as the Navy Department's liaison with Congress. He received reprieve in the shape of orders to report to England aboard the dirigible ZR-3, which was to be flown to the United States. A few days after his arrival the ship, while on a test cruise, exploded.

Despite these disasters Byrd was not to give up his idea of trans-ocean flights. Still ahead of him were the pioneering flights over the Arctic, the Atlantic and the Antarctic.

In addition to flying, the polar regions had interested him ever since his boyhood. Raising money from private sources, in 1925 he approached the Navy with plans for the organization of an expedition for aerial exploration in North Greenland. CDR (later RADM) Donald B. McMillan, USN, also a polar explorer, had asked the Navy Department for two planes and so had Byrd. As there were only three amphibians in the Navy at that time, the two men joined forces.

With three planes and a picked group of mechanics and pilots, Byrd acted as flying officer of the expedition. It was on this trip that he became acquainted with Floyd Bennett, MMC, USN, who later flew with him over the Pole. A friendship began that lasted until Bennett's death in 1928.

With Bennett, Byrd made several notable flights over Greenland and as far north as Ellesmere Island. It was dangerous flying, accompanied by depressing toil of preparation. But it gave him his first taste of the North, and he liked it. The mystery and silence of the frozen land got into his blood. As a result of his experience, he and Bennett decided that a flight to the North Pole was possible.

It was not until 1926 that he could obtain leave for himself and Bennett. The steamer *Chantier* was assigned to his expedition which sailed for Spitsbergen in April. From Spitsbergen they proceeded by plane. They flew over the North Pole on 9 May 1926. The epoch-making flight was over in a matter of hours. Sixteen hours after they had left their base at Kings Bay on the Arctic Ocean they were back—after having flown 1360 miles.

The news of the flight was received with enthusiasm all over the world. When he returned to New York, Byrd suddenly found himself a hero. The Medal of Honor was bestowed on him. He was promoted to commander, while Bennett received the rank of warrant officer.

BYRD TOOK TIME out from polar exploration in 1927 to join in the air race across the Atlantic. The flight he and his crew made was one of several that prepared the way for regular transatlantic airplane service.

Byrd and his crew flew nonstop from New York to Ver-sur-Mer, France, on 29-30 Jun 1927. They covered 3477 miles in 43 hours, 21 minutes. These and many other flights of the period demonstrated the day of transoceanic and transcontinental nonstop flight was dawning.

The idea of taking part in the race came to Byrd while he was still in the Arctic after he had flown to the North Pole in 1926. While the expedition ship, *Chantier,* was still at Kings Bay, Spitsbergen, Byrd stood on deck one day with Floyd Bennett and other friends. They talked about the future.

"I'd like to fly the Atlantic now," said Admiral Byrd.

"So would I," said Mr. Bennett. "We can do it with that plane."

However, after the plane—the *America*—was remodeled, it crashed on its first test flight. Although it was later repaired, Byrd's wrist was broken, and Bennett was injured so badly that for a time it was thought he would not recover. Bennett's place was taken by Bert Acosta. Others in the crew were Bernt Balchen and George O. Noville.

On 29 Jun 1927, the huge *America* rose slowly and started for Paris with a circling escort of small planes. That was the beginning of one of the most desperate air voyages ever undertaken.

The weather was bad all the way. For hours they flew through fog, over clouds, and past dark, towering masses of mist.

When they saw the coast of France, it was the most welcome bit of coastline they had ever seen. But the worst conditions were at the end of the flight. They found north central France enveloped in a violent storm.

So the nose of the plane was turned again toward the sea. After another long battle with the storm they reached the coast and picked up the lighthouse near Ver-sur-Mer. Flares were dropped, and by their illumination Balchen brought the plane down. As it touched the waves, the wheels were torn off. The *America* landed with a crash and filled with water. The crew made its way to land in a collapsible boat.

Byrd had not reached his objective, but he had given the world a more dramatic moment than if he had. The flight added greatly to his reputation. His care in preparing for the venture had been fully justified. The airplane had proven its safety, and its radio had enabled the fliers to navigate when the earth and sky and the sun were obscured. It was the first really scientific flight over the ocean, a flight in which safety was made a major objective.

WHEN HE RETURNED to the United States, Byrd was already full of plans for his next venture, exploration of the Antarctic and a plane flight over the South Pole. He set in motion the machinery for a most complete expedition to the Antarctic.

The goal of the expedition was not only a flight to the Pole but also—what was of greater scientific importance—exploration of a part of the vast continent of five million square miles, which was almost unknown, except for a few places on the outer edge.

To supplement the exploration work of the planes Byrd took with him a scientific staff of 12 men, many types of instruments, and dog sleds. With this equipment he hoped to clear up many of the mysteries of the Antarctic. His flying was to be chiefly over King Edward VII land and the country to the south and east, which was within easy striking distance of his base.

The expedition consisted of three ships, *The City of New York, Eleanor Bolling* and *Larsen. Larsen* departed from Wellington, New Zealand, ahead of the others. They departed from Dunedin, New Zealand, on 2 Dec 1928.

After a brief stay at Discovery Inlet the ship went on to the Bay of Whales. Byrd found the bay filled with ice, which showed no signs of going out, as it had done when Roald Amundsen had wintered there. Unloading operations began at once, however, and the heavy load of shelters, food, gasoline, oil, and other supplies was hauled distances of from eight to 10 miles to the base camp at the head of an ice inlet off the bay.

Such a route was always difficult because of the fog and clouds, which frequently came up rapidly and barred the way. The flights were made in the "Floyd Bennett," named in honor of the Navy chief who had made the flight with him over the North Pole. On the first short flight Admiral Byrd saw mountains (later named the Rockefeller Mountains) that were to be photographed and explored in detail.

The coastline was also traced eastward from the Bay of Wales farther than a ship had been able to penetrate by sea, and some distance beyond the *nunataks*—insular hills surrounded by ice sheets—discovered by the British explorer Scott, and named after him.

The geological party, headed by Dr. Laurence M. Gould, had gotten underway sometime before Byrd was ready for the long flight to the South Pole. Dr. Gould's party was at the Queen Maud Mountains reporting on weather conditions. An airplane supply base had also been placed at the foot of these mountains by plane.

AFTER THE MANY YEARS of planning and preparation, the actual flight over the Pole was almost anticlimactic. Here, in part is Byrd's description:

There were handshakes all around, and at 3:29 o'clock we were off. The skis were in the air after a run of 30 seconds—an excellent take-off. A calm expectation took hold of my mind.

Had you been there to glance over the cabin of this

POLAR FLYER—In 1925 LCDR Byrd commanded a naval aviation unit accompanying CDR MacMillan to Arctic.

BYRD LAND—Antarctic base receives a snow job during winter blizzard in 1931 on Byrd's second trip south.

modern machine which has so revolutionized polar travel, I think you would have been imrpessed most of all—perhaps first of all—with the profusion of gear in the cabin. There was a small sledge, rolled masses of sleeping bags, bulky food sacks, two pressure gasoline stoves, rows of cans of gasoline packed about the main tank forward, funnels for draining gasoline and oil from the engines, bundles of clothing, tents an so on ad infinitum. *There was scarcely room in which to move.*

It was quite warm forward, behind the engines. But a cold wind swept through the cabin, making one thankful for heavy clothes. When the skies cleared, a golden light poured into the cabin. The sound of the engines and propellers filled it. One had to shout to make oneself heard. From the navigation table aft, where my charts were spread out, a trolley ran to the control cabin. Over it I shot to Balchen the necessary messages and courses.

That, briefly, is the picture, and a startling one it makes in contrast with that of Amundsen's party, which had pressed along this same course 18 years before. A wing, pistons and flashing propellers had taken the place of runner, dogs and legs. Amundsen was delighted to make 25 miles per day. We had to average 90 miles per hour to accomplish our mission. We had the advantages of swiftness and comfort, but we had as well an enlarged fallibility. A flaw in a piece of steel, a bit of dirt in the fuel lines or carburetor jets, a few hours of strong head winds, fog or storm—these things, remotely beyond our control, could destroy our carefully laid plans and nullify our most determined efforts.

Between 11:30 and 12:30 o'clock the mountains to the eastward began to disappear, dropping imperceptibly out of view, one after another. Not long after 12:30 o'clock the whole range had retreated from vision, and the plateau met the horizon in an indefinite line. The mountains to the right had long since disappeared.

The air finally turned smooth. At 12:38 o'clock I shot the sun. It hung, a ball of fire, just beyond south to the east, 21° above the horizon. So it was quite low, and we stared it in the eye. The sight gave me an approximate line of latitude, which placed us very near our position as calculated by dead reckoning. That dead reckoning and astronomy should check so closely was very encouraging. The position line placed us at Lat. 89° 4½′ S., or 55½ miles from the pole. A short time later we reached an altitude of 11,000 feet. According to Amundsen's records, the plateau, which had risen to 10,300 feet, descended here to 9,600 feet. We were about 1,400 feet above the plateau.

So the Pole was actually in sight. But I could not yet spare it so much as a glance. Chronometers, drift indicators and compasses are hard task-masters.

Relieved at the controls, Balchen came aft and reported that visibility was not as good as it had been. Clouds were gathering on the horizon off the port bow; and a storm, Balchen thought, was in the air. A storm was the last thing we wanted to meet on the plateau on the way back. It would be difficult enough to pass the Queen Maud Range in bright sunlight; in thick weather it would be suicidal. Conditions, however, were merely unpromising: not really bad, simply not good. If worse came to worst, we decided we could out-race the clouds to the mountains.

At six minutes after one o'clock, a sight of the sun put us a few miles ahead of our dead reckoning position. We were quite close now. At 1:14 o'clock, Greenwich civil time, our calculations showed that we were at the Pole.

I opened the trapdoor and dropped over the calculated position of the Pole the small flag which was weighted with the stone from Bennett's grave. Stone and flag plunged down together. The flag had been advanced 1500 miles farther south than it had ever been advanced by any American or American expedition.

For a few seconds we stood over the spot where Amundsen had stood, December 14th, 1911; and where Scott had also stood, thirty-four days later, reading the note which Amundsen had left for him. In their honor, the flags of their countries were again carried over the Pole. There was nothing now to mark that scene: only a white desolation and solitude disturbed by the sound of our engines. The Pole lay in the center of a limitless plain. To the right, which is to say to the eastward, the horizon was covered with clouds. If mountains lay there, as some geologists believe, they were concealed and we had no hint of them.

And that, in brief, is all there is to tell about the South Pole. One gets there, and that is about all there is for the telling. It is the effort to get there that counts.

BECAUSE OF LONG PREPARATIONS and continuous radio news from the Antarctic, the South Pole flight caused even more of a sensation than Byrd's North Pole flight. Upon his return to the States, he was promoted to Rear Admiral by Congress, and a Congressional Medal was struck to be presented to all the members of the expedition.

Spectacular as the polar flight was, the exploratory work of the expedition was of greater basic importance. But to the general public, the important result of the expedition work was eclipsed by the polar flight. A few days after the flight over the Pole, Byrd made a flight to the northeast and for once was not stopped by clouds and fog. He traced the coast to its most northerly point in this sector of the Antarctic, reaching a region that had been and still is beyond the reach of ships.

He also discovered the entire eastern boundary of the Ross Sea. He found that the sea ended on the east, as it did on the west, in a magnificent range split by huge glaciers. It was the most important discovery of the expedition but it went almost unnoticed.

NOTE: Italicized material on this and preceding page is quoted from the book "Exploring With Byrd," by RADM Richard E. Byrd with permission from copyright owner.

When Admiral Byrd returned to the Antarctic in 1933 he had at his disposal two planes much larger than those he had used on his first expedition.

It was this winter that Byrd isolated himself in a hut 125 miles south of Little America for the purpose of making meteorological observations to be checked against those at the northern base. Gas fumes from his stove, resulting from a clogged chimney, incapacitated him during his stay, so that he was sick and weak when a tractor party reached him in early spring. His health was so impaired that he was able to go on only one of the many airplane flights during the summer season of exploration.

This expedition obtained contours that showed a plateau of about 4000 feet between the Edsel Ford Range and the Queen Maud Mountains. This disposed of the theory that there was a frozen strait, partly filled in, through this part of the Antarctic between the Ross and Weddell Seas.

In 1939-40 he participated in another Antarctic expedition which, among other things, explored an area of more than 100,000 square miles.

A crowning recognition of Byrd's polar experience came in 1946, when he was placed in command of the most ambitious polar expedition ever attempted—the Navy's Antarctic Development Project, Task Force 68. Thirteen ships and their planes, with a complement of some 4000 men, were placed under his command as Operation High Jump.

One group of this task force reported the discovery of an "oasis." Described as a Shangri-La, the area was reported to contain many lakes with nearby bare ground showing evidence of vegetation. The same group, about a month later, reported another such "oasis."

Some concept of the conditions under which men of the Antarctic must work might be gained from the observations and comments of those who participated in this cruise—one which at that time was the best equipped yet to have entered the area:

- It takes three hours for five men to travel five miles in a Weasel.
- Tools placed on top of the snow were completely buried within two minutes.
- Drifts around the tents were so high it was necessary to shovel your way in and out of the entrance.
- Shoes are frozen to the floor when you get up in the morning.
- No one washes or shaves.
- Camera shutters will not work.
- Most of the time is spent hugging pot-bellied stoves. You treat yourself like a flapjack. First, you heat your front then flip over and heat the rear. Meanwhile, the other side is getting cold.

RADM Richard E. Byrd, USN

BACK AGAIN — As commander for Operation Deep Freeze RADM Byrd visits Little America he set up in 1929.

Observations made concerning the camp mess hall (known as the most southern and coldest restaurant in the world):

- Customers eat with one, and sometimes two, pairs of gloves.
- Men consume 6000 calories a day (about twice as much as the customary military diet of 3200 calories).
- Oil heaters are spaced throughout the mess hall, but a few feet away they are about as useful as cigarette lighters.
- It takes from 36 to 48 hours to thaw steaks enough for cooking.
- All water must be obtained by melting snow or ice. A rubber hose shoots steam into a bucket where a chunk of ice has been placed. In about 15 minutes the ice is melted and the water is rushed to the mess hall before it is frozen again.

In 1954, RADM Byrd was placed in over-all command of Operation Deep Freeze, which between 1955 and 1959, is to prepare, supply and maintain a series of scientific stations in the Antarctic in connection with the International Geophysical Year. (See All Hands, May 1956, p. 2.) *He was serving in this capacity at the time of his death.*

TAFFRAIL TALK

As happens even with well organized publications, All Hands staff members frequently run across interesting if not too significant items which they would like to use, but they can't quite find the right spot for them. Such trivia usually end up on the desk of the Editor-in-Charge-of-Small-Lots-and Misc., known to the public as Taffrail. Such was the fate of certain releases from USS *Hornet* (CVA 12) which rightfully belonged in the August Special Services issue.

One, the result of *Hornet's* Far East tour, told of the *Hornet* Hotsi Bath, claimed to be the latest and only steam bath in the entire Fleet. Located on the 02 level just off the forward port gun mount, the steam bath has become one of the most popular spaces aboard ship. *Hornetmen,* who have tried Japanese "hotsi" baths, have learned that steam baths can relax nervous tension and ease the aches and pains of physical fatigue. All hands, from plane mechanic to boilerman, have been making use of this facility.

For those who want to return without delay to their usual state of weariness, tension and neuroses, an exercise room complete with weight lifting equipment, a punching bag, and a training bag, is conveniently located next to the Steam Room.

★ ★ ★

Under the circumstances it would take but a small amount of journalistic license to refer to USS *Hopewell* (DD 681) as a bird sanctuary. With head down through darkness and rain, John W. Schmutz, SN, was making his way to the bridge to relieve the watch. Without warning, he felt a firm grip on his shoulder. He turned his head to look into the eyes of a fish hawk.

Fortunately for Schmutz' nervous system, the hawk was simply tired from the storm, was obviously tame and unafraid of humans, and simply wanted free meals and lodging. He (or she) received both for more than a week. Then he (or she) simply went AWOL.

There's no point or moral to the story, unless you want to ponder the fact that you never know what you'll run into next.

★ ★ ★

To our way of thinking the people in the San Diego Post Office rate a steak for delivering the mail. Not long ago they received a package (minus a return address) for a man we'll call John Smith. It was addressed like this:

Mr. John Smith, 887 L St., Lawrence County, San Diego, Calif.

After making a thorough search and learning there was no such address, a bright clerk sent the package on to the post office of the Fleet Sonar School. There, the address was unscrambled so that the package could be delivered to Navyman John Smith, serving on board USS *Lawrence County* (LST 887).

If that doesn't rate a T-bone, we don't know what does.

The All Hands Staff

The United States Navy

Guardian of our Country

The United States Navy is responsible for maintaining control of the sea and is a ready force on watch at home and overseas, capable of strong action to preserve the peace or of instant offensive action to win in war.

It is upon the maintenance of this control that our country's glorious future depends. The United States Navy exists to make it so.

We Serve with Honor

Tradition, valor and victory are the Navy's heritage from the past. To these may be added dedication, discipline and vigilance as the watchwords of the present and future. At home or on distant stations, we serve with pride, confident in the respect of our country, our shipmates, and our families. Our responsibilities sober us; our adversities strengthen us.

Service to God and Country is our special privilege. We serve with honor.

The Future of the Navy

The Navy will always employ new weapons, new techniques and greater power to protect and defend the United States on the sea, under the sea, and in the air.

Now and in the future, control of the sea gives the United States her greatest advantage for the maintenance of peace and for victory in war. Mobility, surprise, dispersal and offensive power are the keynotes of the new Navy. The roots of the Navy lie in a strong belief in the future, in continued dedication to our tasks, and in reflection on our heritage from the past. Never have our opportunities and our responsibilities been greater.

ALL HANDS the Bureau of Naval Personnel Information Bulletin, with approval of the Bureau of the Budget on 23 June 1955, is published monthly by the Bureau of Naval Personnel for the information and interest of the naval service as a whole. Opinions expressed are not necessarily those of the Navy Department. Reference to regulations, orders and directions is for information and does not by publication herein constitute authority for action. All original material may be reprinted as desired if proper credit is given ALL HANDS. Original articles of general interest may be forwarded to the Editor.

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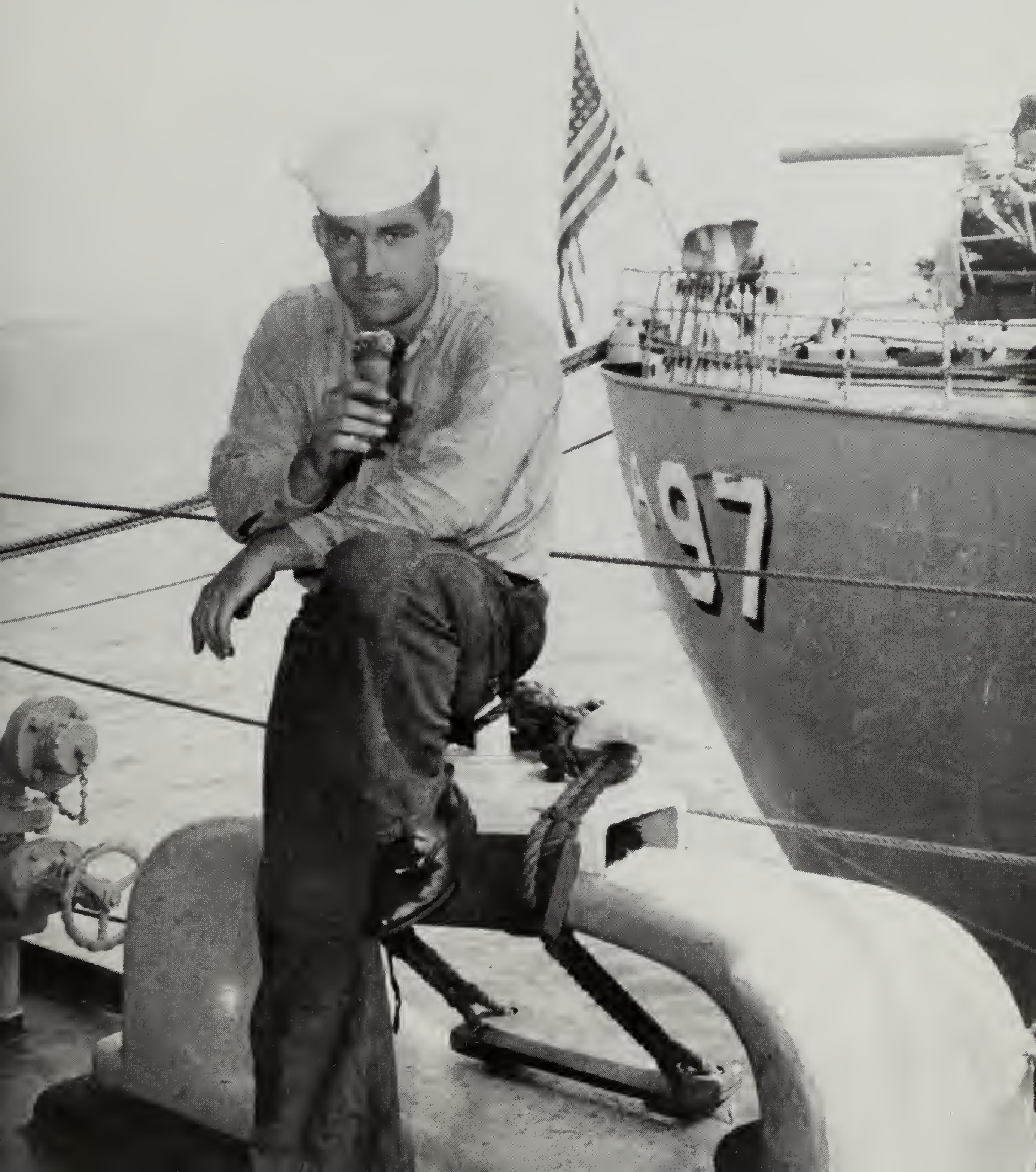
• AT RIGHT: ICE CREAM CONE from the geedunk stand of USS *Cavalier* (APA 37) is enjoyed on ship's fantail by D. E. Hineline, BT3, USN, while ship is moored at Long Beach, Calif.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SEAPOWER

YOUR NAVY HAS
MORE JOBS TO DO TODAY
IN MORE PLACES THAN EVER BEFORE

ALL HANDS

THE BUREAU OF NAVAL PERSONNEL INFORMATION BULLETIN

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18 APR 1958

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OCTOBER 1957

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ALL HANDS

THE BUREAU OF NAVAL PERSONNEL INFORMATION BULLETIN

OCTOBER 1957 Nav-Pers-O NUMBER 489

VICE ADMIRAL JAMES L. HOLLOWAY, Jr., USN
The Chief of Naval Personnel

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The Deputy Chief of Naval Personnel

CAPTAIN O. D. FINNIGAN, Jr., USN
Assistant Chief for Morale Services

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• FRONT COVER: GETTING UP IN THE WORLD — With liberty in mind, Frank Ortiz, SN, climbs up 3"-gun director while USS *Murrelet* (MSF 372) is moored at Long Beach Naval Shipyard.

• AT LEFT: SKY HOOK — Looks as if USS *Worcester* (CL 144) expects big lift during upkeep period at Long Beach Naval Shipyard while other ships are in for more extensive yardwork.

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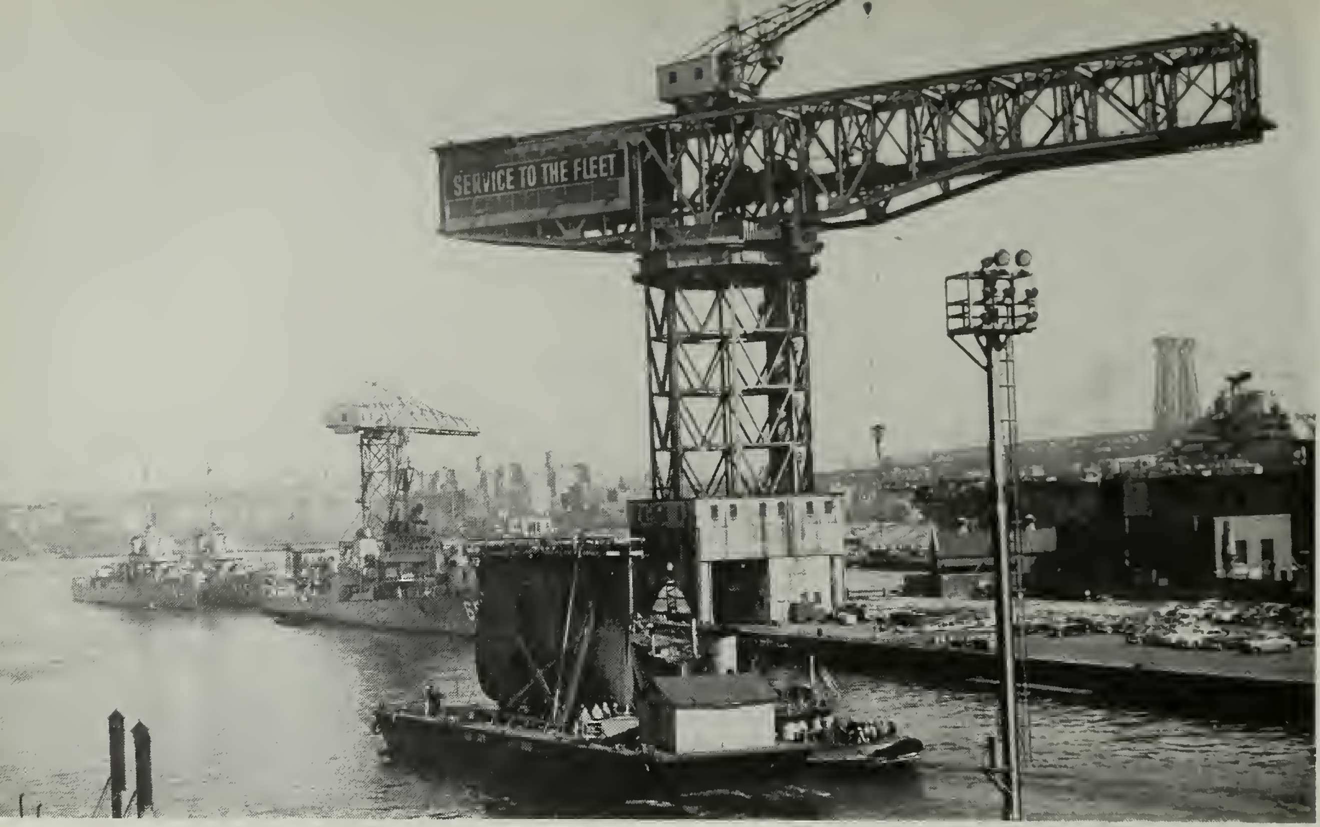


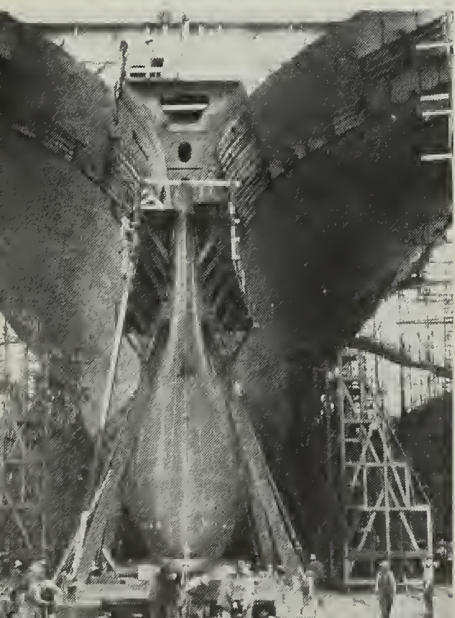
SHIP'S SERVICE

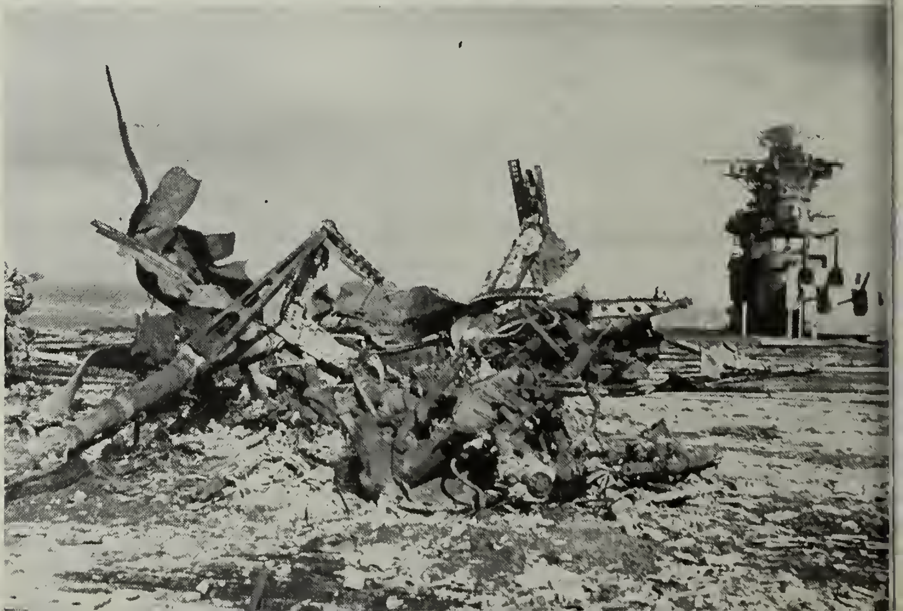
ON THE MORNING of 19 Mar 1945, USS *Franklin* (CVA 13) was operating with the Fast Carrier Task Force in the air strike against remnants of the Japanese fleet sighted in the Inland Sea. Many of her planes were still on deck, loaded with bombs, rockets and machine-gun ammunition, ready to take off.

Suddenly a Japanese dive-bomber streaked down out of the clouds. Pulling out of his dive at low altitude, he released two armor-piercing 500-pound bombs. Both scored hits. One detonated beneath the flight deck on which the planes were spotted ready for takeoff. The second went on to the hangar deck, where other planes, fueled and armed, were waiting to be taken to the flight deck.

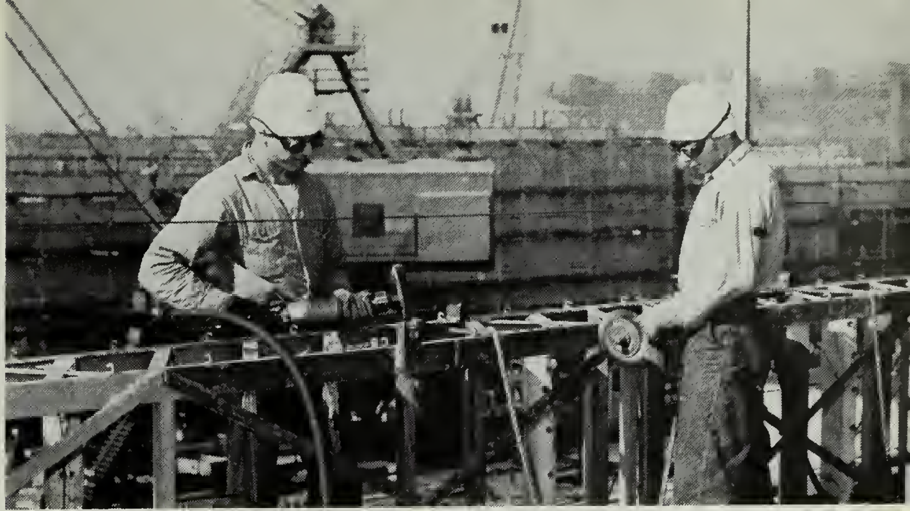
Many major explosions followed

BIG JOBS—Bow from *Hornet* moves across NYNSY to repair *USS Wasp* (left) *Below* Right: *USS Franklin* (CVA 13) before she was made to look shipshape.





BY THE YARD


HELPING HANDS—While *USS Bennington* (CVA 20) was docked for conversion many jobs were done. Here, carriermen prepare ladder for painting.

the first blasts. Large bombs exploded and threw men and planes the length of the ship. Smaller bombs, rockets and machinegun ammunition killed dozens of men who had survived the first explosions. Many tons of bombs and ammunition exploded aboard the carrier and the resulting fires were fed by thousands of gallons of aviation gasoline.

The whole after end of the carrier's flight deck had become a mass of flames and smoke. Airplanes disintegrated, as did their pilots and crewmen. Aviation gas poured over the sides of the hangar deck like a blazing Niagara. Bombs, rockets, bullets, splinters of wood and steel fell all around survivors who hugged the decks for safety. Casualties: 341 killed; 431 missing; more than 300 wounded.

What does this have to do with a story on shipyards?

Plenty. *Franklin* struggled homewards (under her own power), entered New York Naval Shipyard. Shipyard experts looked at her buckled steel plates, the torn masts, the broken decks—and took over.

At the New York Naval Shipyard all her armament was replaced, 80 per cent of her superstructure rebuilt, the entire ship rewired, and *Franklin* was ready to serve again.

Here's another example:

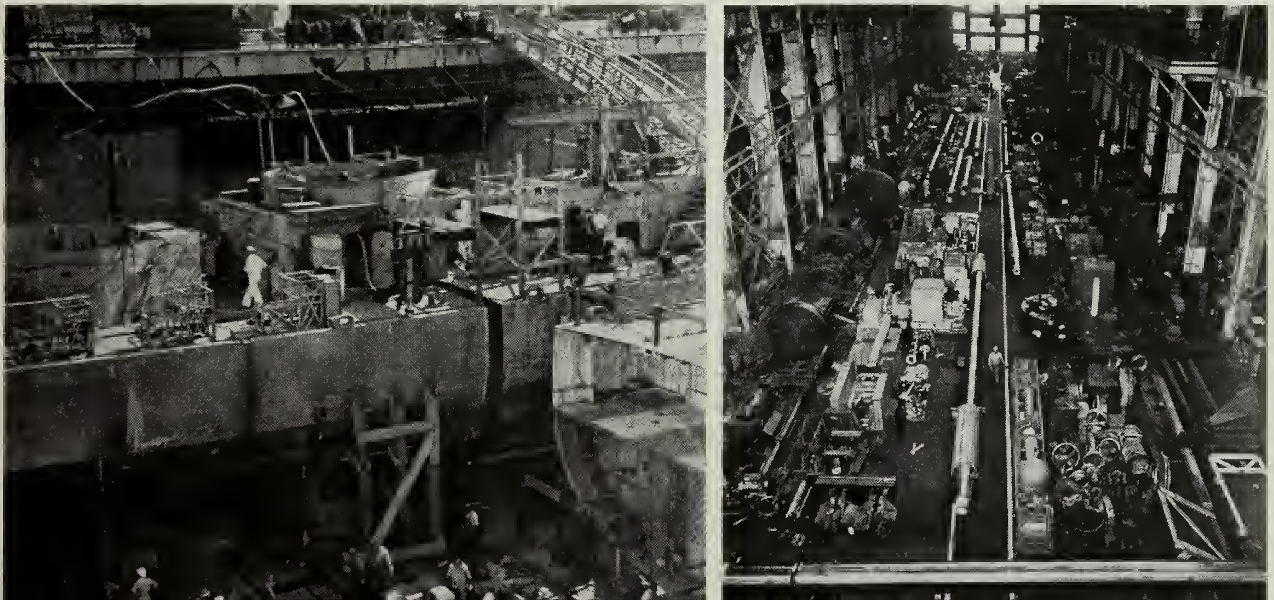
In an attack by a German submarine in the Mediterranean a year earlier, uss *Menges* (DE 320) took two torpedoes that blasted off the after third of the ship. In another action, uss *Holder* (DDE 819) was struck amidships by an aircraft torpedo, wrecking two enginerooms and surrounding compartments.

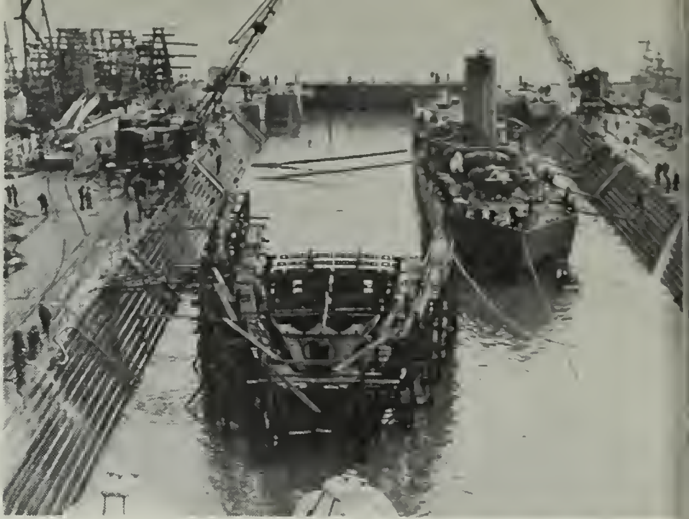
Towed to the New York Naval Shipyard, remnants of *Menges* and *Holder* were placed side by side. Supported by special cradles, the two vessels were cut, skids were greased, and with the aid of powerful cranes and hydraulic jacks, a 94-foot section of *Holder* was slipped into position astern *Menges.* When the keels of the two ships were aligned, there was a difference of no more than one and one-half inches. This slight correction made, the two parts were welded together. A new *Menges,* so called because the major portion of the hull belonged to that ship, was then ready for service. The same kind of job was done later on uss *Wasp* (CVA 18) and uss *Ernest G. Small* (DD 838), the latter a victim of a mine in Korean waters.

These incidents demonstrate the versatility and competence of the typical Navy Shipyard. They also serve to point out the vast distances the shipyards of the Navy have traveled since their establishment in 1800.

At that time, there were only three yards under control of the Navy. Two of these, Portsmouth and Boston, have since grown into industrial giants. The third, at Washington, D. C., later became famous as the Naval Gun Factory. In 1801, three more shipyards, New York, Norfolk and Philadelphia, were added to the list.

TWO FOR ONE—Forward section of *USS Menges* was merged with afterpart of *USS Holder*. Rt: Shaft shop at Nor. NSY.




WAR DAMAGE—Puget Sound repairs *USS Nashville* (CL 43). *Rt.: USS Shaw* (DD 373) gets bow at Mare Island.

It wasn't until more than 50 years later, in 1854, that the Navy began to repair its ships on the West Coast. First to be created was a shipyard at Mare Island, Calif., and an additional yard was later established in 1891 at Puget Sound, Wash., to help handle repairs.

The basic problem—the transition of ships from one technological development to another—faced by the early shipyards is the same as that of today. Except in times of emergency, repairs and maintenance are routine chores.

As naval ships evolved from sailing sloops to the modern nuclear powered vessels, the shipyards have had to maintain their facilities at a comparable level. Then, as today, new types of machinery, trained technicians, adequate docking facilities and a more complex system of paper work were needed to meet the challenge of changing times and methods.

One of the earlier and more impressive feats accomplished in this transition of ships took place at the New York Shipyard during the Civil War. The Union forces needed armed ships to maintain the naval blockade. There wasn't time to build ships, so passenger and mercantile ships had to be converted. The handling of the steamship *Monticello* provides a convenient illustration. Placed in drydock in New York, she was stripped of all her plush drapes and velvet fineries. In their place armament was installed. With every available man on the job, *Monticello* was ready to leave the yard 24 hours after she arrived. This was early Navy transition.

Ninety-two years later, this same shipyard was faced with another transitional period. This time, the problem was not the conversion of blockading vesesls, but the modernization of the aircraft carrier.

First of the carriers to receive the angled deck was USS *Antietam* (CVS 36). Installation of the new fangled angle deck created several problems. The flight deck had to be installed at an angle of ten and one-half degrees to the center line. In addition, complex calculations had to be made so that the landing area would be precisely 525 feet long with a width at the landing ramp of 70 feet, narrowing down to 32 feet, eight inches at the extreme forward end. Also, new types of equipment had to be installed to ease landing and take-off operations.

During her trials, *Antietam* demonstrated that the many hours spent on the alignment of her flight deck had paid. Now, the Navy knew it could adopt its World War II carriers to the jet age.

New York wasn't the only shipyard to be challenged by the carrier problem. San Francisco and Puget Sound went through the same experience. At San Francisco, USS *Bon Homme Richard* (CV 31) was one of the first to receive the new look. Here, the big problem was the alignment of her steam catapult. It was found that the trueness of the catapult trough varied with the time of day, temperature and the movement of the ship. To minimize distortion, it was installed during the cooler hours of the night.

At Puget Sound, where USS *Shangri La* (CVA 38) was converted, the elimination of the centerline elevator required a new type, so PSNS designed and fabricated

KEEPING UP—Navy yards perform an important service keeping the Fleet up to date. *USS Ticonderoga* (CVA 14) eases out after being modernized.

TEAMMATES—Sailors and yardmen work to keep ships in top shape. In background is 'Herman the German.' *Below: USS Saratoga* (CVA 60) is worked on.

the Navy's first all-welded aluminum deck-edge elevator. Its use saved approximately 31,000 pounds of weight as compared to the earlier steel elevator. The aluminum elevator was larger and its capacity was increased from 46,000 to 57,000 pounds.

WHAT IS A SHIPYARD? It has been aptly, if somewhat informally summed up by a Norfolk shipyard worker: "A shipyard works something like an oversized garage for ships. It does everything from repairs to major changes or alterations." (Naval Shipyards have built ships completely from scratch, of course, particularly in wartime, when private shipyards have been pushed beyond their capacity. For the job done by America's private shipbuilders, see the *Ranger* story, page 16).

One of the biggest (in more ways than one) assets to these "oversized garages" is the drydock. There's hardly a ship afloat that has not made a routine visit to a drydock for upkeep. In spite of the many changes made to the rest of the shipyard through the years, the drydock has remained essentially the same. They may have grown in size, but their functions have not altered.

Before the introduction of the drydock, underwater portions of a ship were cleaned or repaired by listing first one side of the ship, then the other, out of the water (called "careening"). It was a difficult and precarious job; never completely satisfactory.

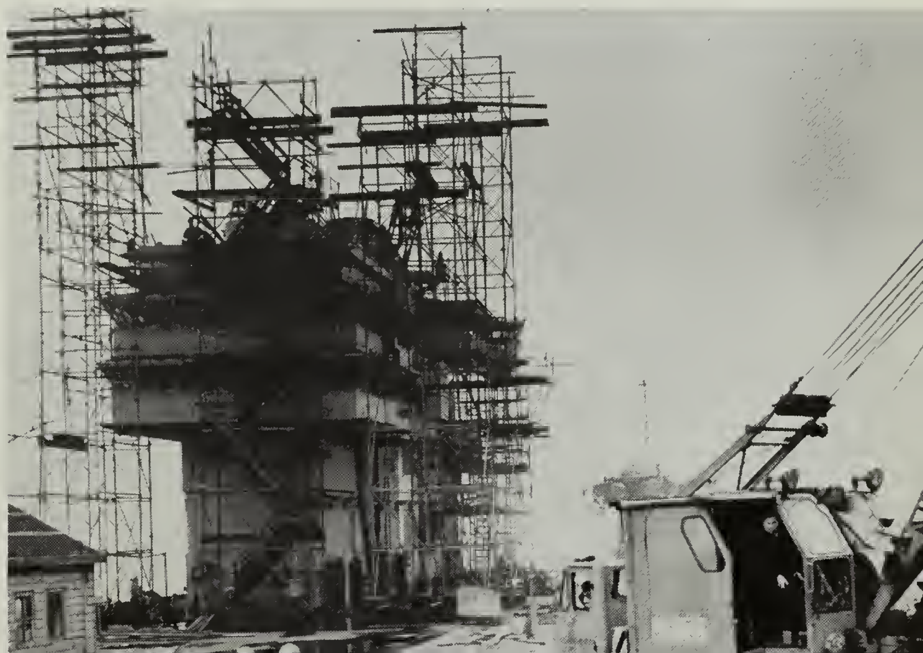
The first "drydock" was built at the Naval Gun Factory, Washington, D. C., in 1822 on the same principle as our present-day marine railway. To demonstrate its usefulness, its inventor, Commodore John Rogers, USN, used the 1725-ton frigate *Potomac* as his model. It took 150 men to haul the vessel, by sweat and muscle, out of the water and up the inclined plane into the drydock. Their rate of pull during the haul-and-tug phase was four feet a minute. This experimental model is still in use today.

From that time on, the drydock has been a permanent fixture in every shipyard. Its use has made possible the repair of ships apparently beyond the point of recovery.

One of the truly big jobs handled by drydocks was in 1908 at the San Francisco Shipyard, which drydocked 23 ships of the Great White Fleet in 28 days. This is claimed to be a record which still stands today for single dockings.

During the 7 Dec 1941 raid on Pearl Harbor, Drydock No. 1 was under heavy attack. It was in this drydock that USS *Pennsylvania* (BB 38) and the destroyers USS *Cassin* (DD 372) and *Downes* (DD 375) were resting at the time. The drydock itself was only partially damaged but was put out of service temporarily because of the wreckage of the damaged ships. This left but one drydock in the area to handle the tremendous repair job facing the Navy.

It was in this situation that another phase of shipyard work—salvage—came to the fore. Opera-



WELD DONE—Welder's torches are common sights around shipyards where Navymen and civilians build.

tions were divided into two categories: repairs to the eight damaged vessels still afloat, although seriously flooded; and repair of the nine sunken or grounded vessels.

Handicapped by lack of material, yard workers devised an elaborate system which made use of struts, anchors, tackles and winches to right the capsized ships. Working side by side, naval personnel and shipyard workers accomplished one of the greatest repair jobs in modern history.

As they were made reasonably seaworthy, some of the ships found their way to Puget Sound and Mare Island for completion of repairs. Others received the finishing touches at Pearl Harbor.

Throughout World War II, the shipyards shattered one record after another. New York, for example, completed repairs of one kind or another to some 5000 ships, while converting approximately 280 others; San Francisco drydocked 661 ships for overhaul, serviced 209 others; during the 44 months of fighting, Puget Sound provided repairs for 344 warships, including 18 battle-damaged carriers. Similar jobs were handled by the Boston, Norfolk, Portsmouth, Philadelphia, Charleston, Long Beach and Pearl Harbor yards.

Naval shipyards are big operations, and it is easy to see why. The Norfolk Naval Shipyard in Portsmouth, Va., for example, covers 811 acres of land, has 30 miles of paved streets, 426 buildings, 44 miles of railroad track, nine locomotives, 254 cars, 350 cranes and derricks, two shipbuilding ways, seven drydocks, and is capable of drydocking and rendering complete service to the world's largest ships. An 8.5 million-dollar electronics building, begun in 1953, was dedicated 24 Aug 1956.

This shipyard is typical of the other 10 shipyards. It is in their shops where they have the equipment, the manpower and the skill which enable them to ready your ship for sea.

Any discussion of shipyards cannot be made without reference to the use of cranes, more specifically to "Herman the German" (YD 171), now at Long Beach, Calif., and claimed to be the largest floating crane in operation today.

Herman is a big boy. He stands 374 feet tall and, when he stretches his muscles, can lift 385 tons. A prize of war, he was used by Germany in the Baltic Sea during World War II. He survived several bombings by the Allies and, during one raid, his 200-ton pendulum was demolished.

After the war, when it was decided to ship the huge crane to the United States, it was necessary to dismantle it and ship the sections to the West Coast. It took 96 days to tow the crane's pontoon across the Atlantic, through the Panama Canal and up the coast of California to Long Beach.

Another "impossible" feat was undertaken when USS *Yorktown* (CV 5) limped into Pearl Harbor 27 May 1942. It was estimated that the job of repairing her would take 90 days. But the workers of Pearl had other ideas of how long it would take to get her back to sea. The flattop had barely secured her lines to the dock when 1400 workers swarmed aboard. Within 45 hours they had readied the "Lady" for action. To make the job a little more difficult, they did

OLD TIMER—Navy yards date back to 1800 when Navy started to repair ships. Yard at Wash., D. C., was one of first.

BALLED UP—Ships of Reserve Fleet at San Francisco Navy Yard are mothballed and kept in condition by the yard.

it without the aid of blueprints or plans of any kind.

But that was a wartime emergency. In most cases, repairs cannot be done in a matter of days or weeks. The planning, assembling of job orders and "Shipalts," the meetings and decisions, sometimes require many months. If you are in charge of equipment which breaks down and the ship's force can't fix it, then that particular phase of routine overhaul starts with you. Yours is but one of the many jobs that wind up on the ship's work request priority list.

"Routine overhaul," (actually it's called "regularly scheduled overhaul,") is a key term at every naval shipyard. Most of the ships you see in any yard are in various stages of a routine overhaul. Overhauls are given every 18 months for some type ships, every 26 months for others, in-between for still others. The overhaul serves as a ship's reconditioning period. All the hull, electronics, ordnance, machinery and other type gear are repaired, reconditioned or replaced so that when your ship leaves the yard she is ready for any assignment. What's more, she is modernized—some of the latest equipment has been added.

Shipyard experts say that the success of an overhaul depends on two main factors: the degree of cooperation between the ship's force and the yard workmen, and the completeness of the ship's work request priority list. This list is just what it sounds like—a list of requests from your commanding officer to the yard to have certain work done. It's like the instructions you give the mechanic when you take your car around the corner to a filling station for a grease job and check-up.

To help compile this list when the time comes for overhaul, your CO asks all department heads to keep a running list of items that need repair. This they do on what is known as CSMP cards. Current Ship's Maintenance Project cards are kept on every item of shipboard gear.

Next, the work request lists from the various departments are assembled into one master list for the ship, a list on which the CO assigns priority to each request showing the order in which the jobs are to be undertaken. About 90 days before the overhaul date, your CO starts the ball rolling by submitting the master list to his type commander and to the scheduled naval shipyard.

Officers, on the staff of the type commander, screen your ship's work request list to determine which items will be accomplished by the shipyard and which will be done at some later date by a tender or repair ship. They also determine which items will be undertaken by the ship's force and which items—for various reasons—cannot be approved. In addition, the shipyard is granted an allotment of money from the type commander's repair funds to cover the work authorized. About 30 to 45 days before the start of the overhaul, the type commander's report reaches the yard. The yard is

PROPPED UP—Navy yard workers replace ship's screw while she rests high and dry in dock during overhaul.

ON THE BOTTOM—Hull section of ship under repairs is swung into place to rest on keel blocks on bottom of drydock as yard workers line up sections.

then ready for its own advance planning.

Shipyard planners and estimators go over your ship's work requests to determine what replacement parts and other material will be needed. Orders go out for the yard's Supply Department to obtain the needed parts. For parts it doesn't have at its finger tips, the Supply Department must go to a Naval Supply Center or direct to the manufacturer. This is where the little details in your work requests pay off. They tell the yard exactly how much of what to order.

While such parts are being located and assembled, other shipyard planners pore over various plans and instructions to determine the best way to tackle the trickier jobs. Next, they prepare "job orders" which tell the various shops of the yard what must be done to accomplish each job. Here, the question of funds arises. Estimates of costs are made to show how much of the repair funds will be needed for each job—and how many jobs can be undertaken within the funds granted.

All this is "upstairs work." It is vitally important paperwork that you, as a shipboard sailor, are probably little aware of. But it is advance planning like this that pays dividends in the form of a fast and thorough overhaul.

Shortly before your ship enters the yard, you'll notice certain signs. For example, provisions are allowed to run low and storerooms carry less than their usual amount. This is done to provide elbow room in the storerooms. Ammunition is removed too—it would be dangerous to have it aboard during overhaul.

Your ship arrives at the shipyard and moors to the pier. By the time you get topside, steam lines, water lines, air lines and electric power lines have been run to the ship. This is usually the time when you mutter to yourself, "What a madhouse!" Most of the ship's machinery is secured. The only machinery that is left running is that which will be tested or used for tests, or perhaps both. The brow is scarcely in place before shipyard planners, design draftsmen and shipworkers swarm on board to acquaint themselves firsthand with the numerous jobs to be undertaken.

To smooth the way for quick work, an arrival conference is held. In this conference, your ship's officers meet with shipyard planning officials. Work requests are discussed. Together they clinch what work will be undertaken and iron out vague points in requests.

SHIP BUILDERS—Carrier takes shape under cranes at Philadelphia Navy yard during war time construction.

After the arrival conference the ship becomes the baby of the yard's production department. It is up to this key department to complete the work within the time—and the funds—allotted. To see that this happens, a ship superintendent is assigned to your ship. He is a naval officer and he acts as liaison between your ship and the shipyard on all points of the overhaul.

Now workmen come aboard in a flood, each workman intent upon fulfilling some part of a job order. In the more advanced stages of an overhaul it is not unusual for a destroyer to have 350 or 400 shipyard workers on board at one time.

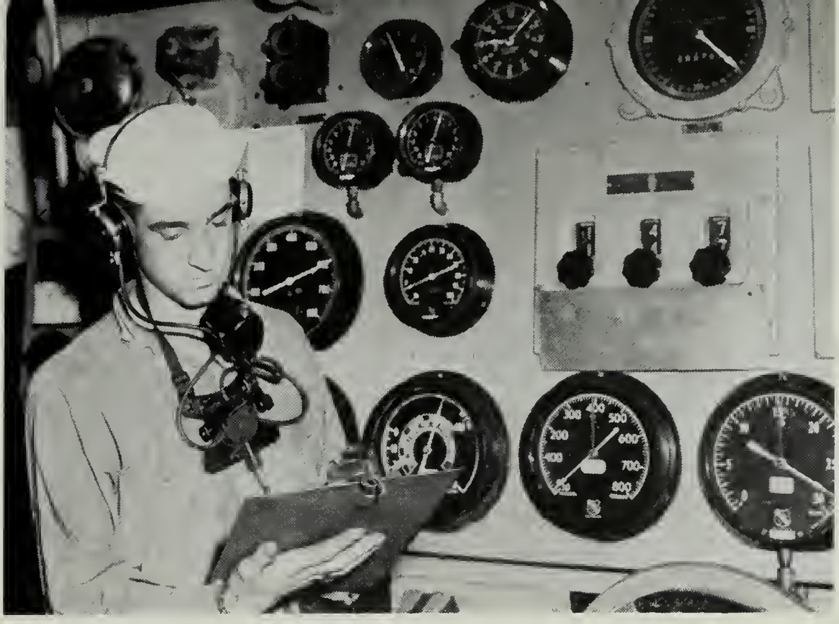
These skilled workmen represent a variety of yard shops ashore. Don't let that word "shop" fool you—some are gigantic. At the San Francisco yard, for example, one steel shop covers almost five acres. Constructed at a cost of $4,000,000 it can accommodate thousands of shipfitters, welders and boilermakers. The pride of this shop is the mightiest steel press west of Pittsburgh, Pa.

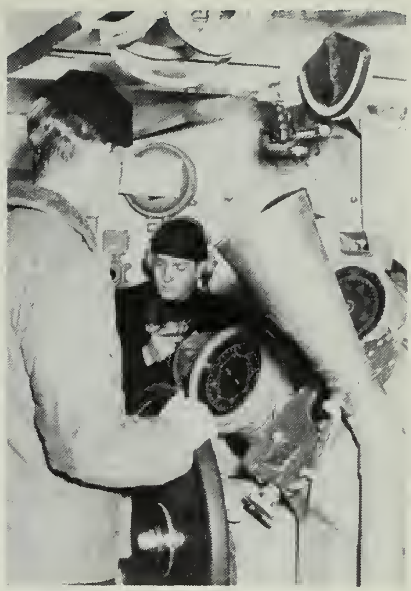
The many shops of a shipyard, along with the various office buildings, store houses and laboratories form its busy "back yard." There are buildings and shops galore at a typical shipyard. The New York yard, for example, has about 260, the Pearl Harbor yard has about 310 and the Norfolk yard, about 425. Some of these buildings, of course, are up in the "front yard," the waterfront area.

Some typical shops that will be called upon during your overhaul are: Paint Shop, Pattern Shop, Optical Shop, Machine Shop, Boat and Joiner Shop, Galvanizing Shop, Pipe and Cooper Shop, Shipwright (or Wood-Working) Shop and the Forge (or Foundry) Shop. This last named shop is often one of the yard's oldest and was probably known in former years as the Blacksmith's Shop.

Although the question of which came first, the chicken or the egg, remains unanswered, it is known that there can't be one without the other. So it is with ship, shipyards, bureaus and men. When it comes to repairs—you can't get much done without one helping the other.

—Thomas Wholey, JOC, USN
—Ned Goodwin, JO3, USN





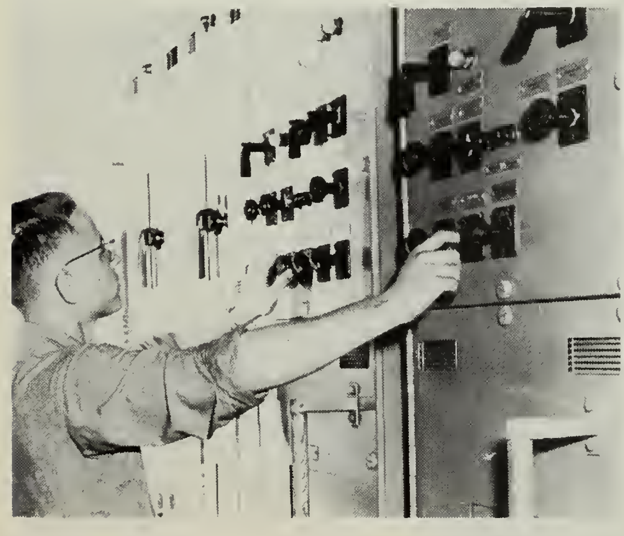
How Ships Speak

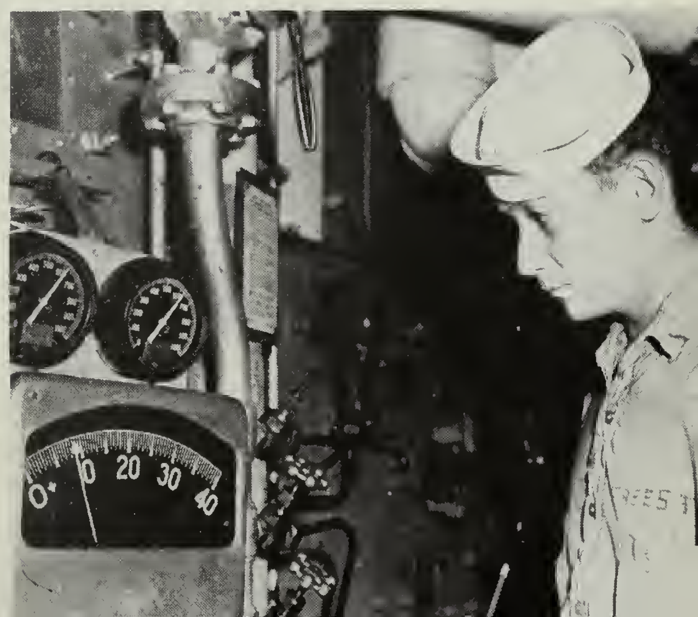
Talking Arrows

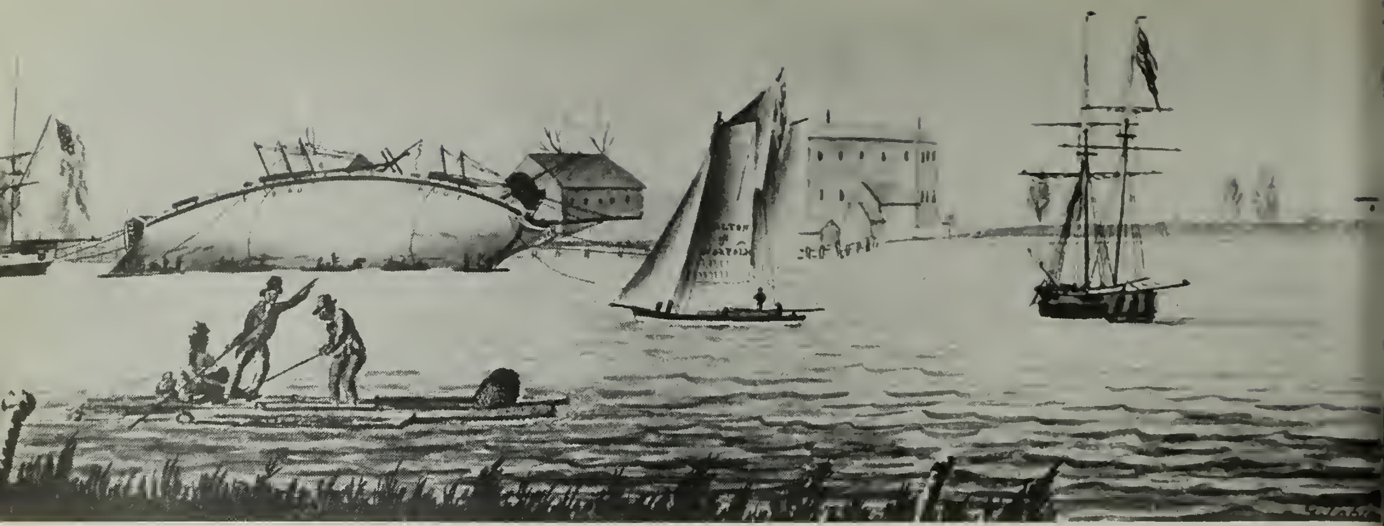
WATCHING THE DIALS go round and round and acting on the info they are continuously passing out is familiar duty for Navymen from bridge to engineroom.

Almost every shipboard rating has its own set of dials to keep POs and strikers needled and their gear operating smoothly and safely. It doesn't take long for a sailor to become acquainted with the indicators in his division of the ship, but how much does he know about the complicated dial systems throughout the ship? Here are just a few needle jobs on board a destroyer-type ship. Before reading further, can you gauge what these destroyermen are checking out?

Top left: Throttleman tabulates the rpm readings to determine average shaft rpms for past hour. *Top right:* Steersman checks compass. *Right:* Oil, water, and fuel pressure are checked in main engineroom. *Lower Right:* Boiler technician in fireroom checks manometer gauge to record air pressure in boiler. *Lower Left:* Electrician's mate equalizes electrical load for diesel generator on main switchboard in engineroom.

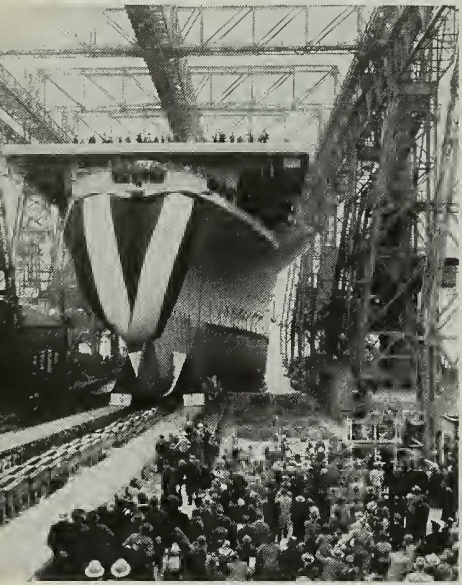






BEFORE DRYDOCKS, ships were careened on side for repairs, as shown in 1795 painting of Gosport shipyard.

This Yard Is Older Than the Navy



NORFOLK played big part in WW II building and repairing ships. Here, *USS Shangri La* (CVA 38) is launched 1944. *Below: USS Olympia in drydock 1902.*

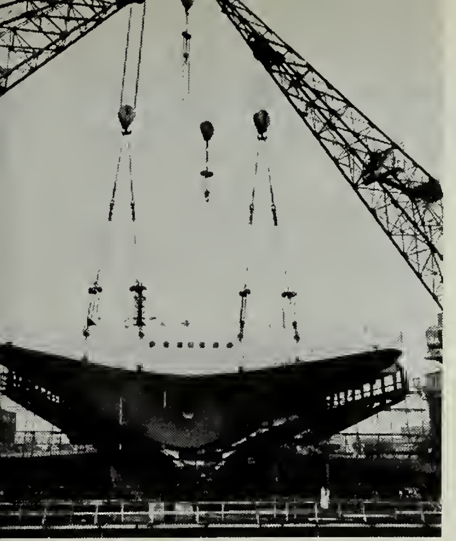
IT SOUNDS IMPOSSIBLE but it's true. Norfolk Naval Shipyard can claim to be not only the oldest Naval Shipyard in the United States, but also older than the Navy.

The yard was established in 1767 under the British flag on the banks of the Elizabeth river at Gosport, a small town that later became part of Portsmouth. Deep water, tall stands of timber and the many navigable waterways made it an ideal spot. At first the yard was little more than a careening ground with tar pots, timber sheds, and a saw pit for hand-sawing large timbers. Under private ownership the yard grew and prospered as the name of Gosport, borrowed from England, attracted many British ships. At the outbreak of the Revolution Virginia took title to the yard from the owner who fled to the British.

The old Gosport yard was the nucleus from which has grown, in the Hampton Roads area, the largest naval base in the world. It has felt the impact of nine wars, was burned three times and has flown six flags from its staff. During the Revolutionary War period, Gosport built ships for the Virginia Navy and was under this colonial flag until the first U.S. flag was flown. In 1779 the yard was invaded by British troops who burned it.

In 1794 the shipyard was leased from the state of Virginia by the U.S. government. After many delays the keel for the 33-gun frigate *Chesapeake* was laid and the ship launched in 1799. The federal government purchased the Gosport Shipyard in 1801. Squadrons under Commodores Dale, Truxtun, and Decatur were frequently serviced or fitted out here. Many of the ships that played an important part in our early Navy were built or reconstructed at Gosport.

When the British took Portsmouth during the War of 1812 the yard narrowly escaped capture. Seamen and Marines from the frigate *Constellation* reinforced the local defenders and defeated a landing attack at the Battle of Carney Island. *Constellation* had been prevented from sailing through the Capes from Washington by the British blockade but was able to be kedged into a position in the Elizabeth River to



put her landing force ashore.

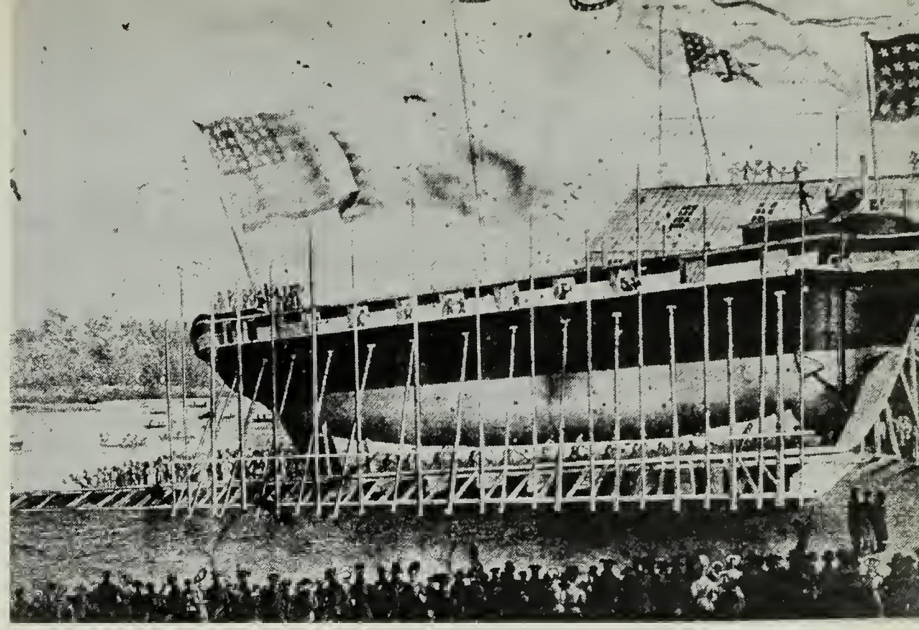
Between the War of 1812 and the Civil War Gosport Yard continued to grow, and in 1834 one of the country's first two drydocks was completed. This dock is still in use today. The line-of-battle ship *Delaware* was built here and was first to use the dock. In 1862 the name Gosport was dropped and the yard became known as U.S. Navy Yard, Norfolk.

During the Civil War the Navy Yard was burned twice and was under three flags, Virginia, Confederate, and U.S. The steam frigate *Merrimac* which had been burned to the water line and sunk by the Union troops when they evacuated was converted by the South into the famed iron-clad CSS *Virginia* While on trial runs near the Norfolk yard she engaged the *Monitor* in the famed battle.

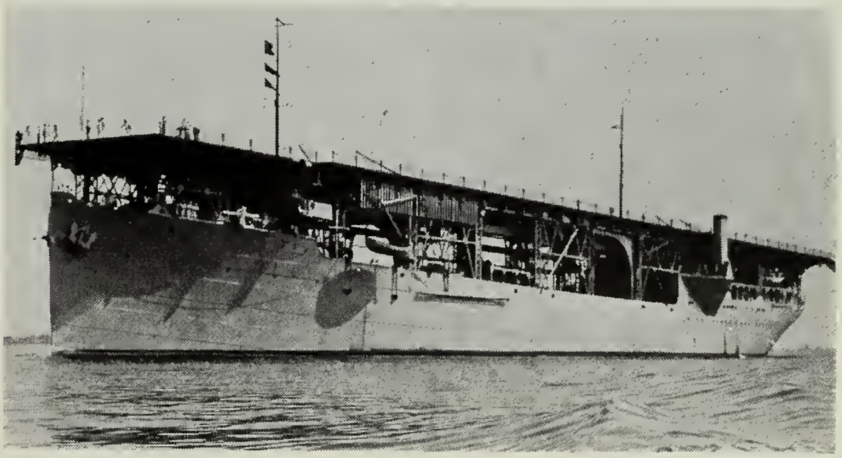
As wood and canvas gave way to steel and steam the Navy Yard built two of the first ships of the then modern Navy. They were protected cruiser USS *Raleigh* and second class battleship USS *Texas*. Throughout the Spanish-American War the Navy Yard at Norfolk was busy converting and fitting out warships.

World War I brought another period of expansion that included three new drydocks as well as many new shop facilities. In addition to servicing the Fleet the yard built four destroyers.

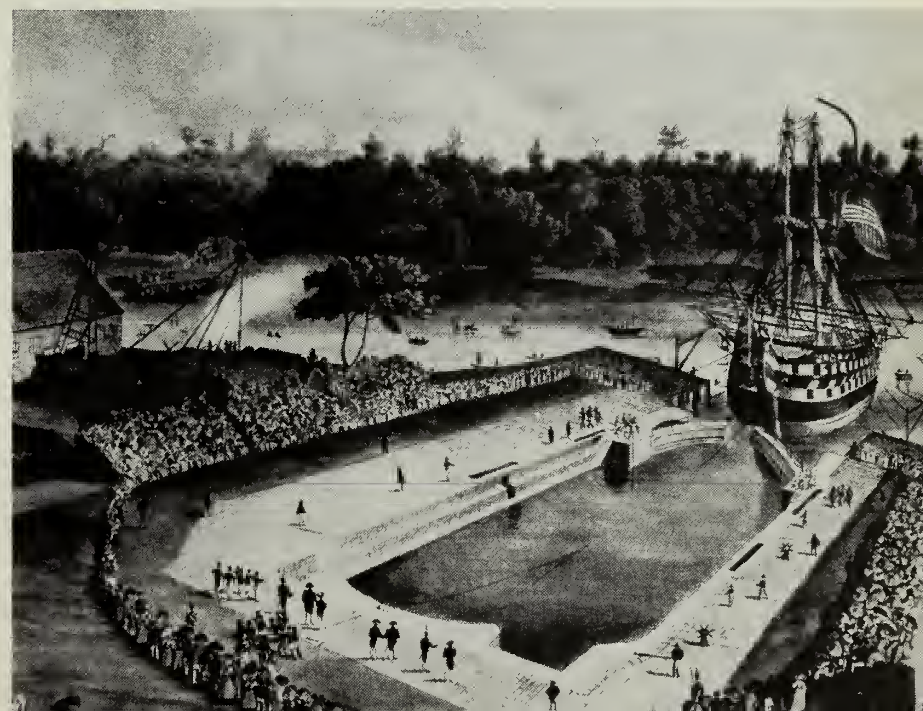
The part played by the Norfolk Naval Shipyard in World War II through service to the U.S. Fleet and many ships of our allies brought about another period of expansion and production that surpassed any of the wildest dreams the old careening ground at Gosport could have imagined.

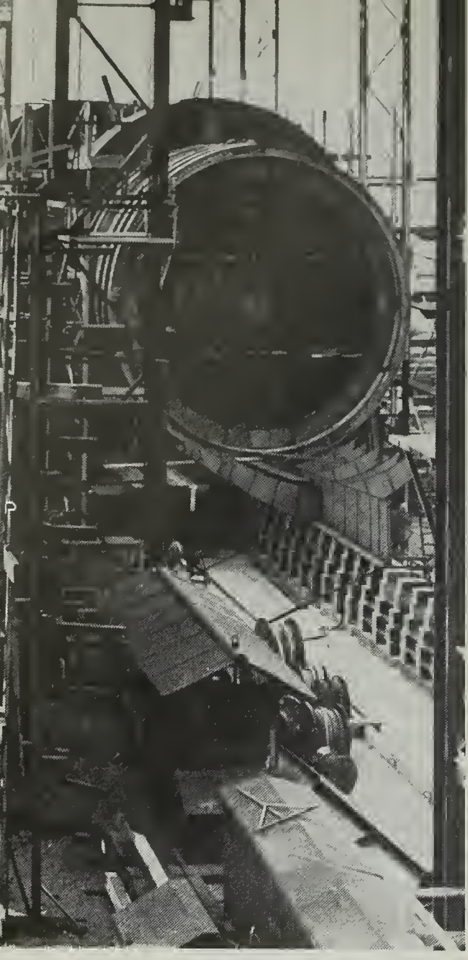


OLD PAINTING shows launching of U.S. Sloop of War *John Adams* in 1830. *Upper Left:* Drydocks at Norfolk in recent years have been converting carriers.



MANY HISTORIC ships were built at Norfolk yard. Above: *USS Langley* Navy's first carrier. Below: *Delaware* the first ship drydocked at Gosport in 1795.





ON THE WAYS—*USS Triton,* SSR(N) 586, shapes up at ship builders. Photo shows sub as she was in early 1957.

New Construction

WHAT'S COMING &

YOU'VE BEEN hearing a lot about all those Navy ships going into mothballs and, on top of this, of reductions in total manpower.

Sure, Navymen are always sorry to see their great ships leave the Fleet, and short-handed crews will groan over the personnel cuts.

But have you taken a look at the ships to come (see the box on the next page) and did you know that this year alone a group of 32 new construction ships will be delivered to the new Navy?

Of the 86 ships ordered to the Mothball Fleet, all but two are of World War II vintage, and their total complement was 20,000 men. The replacement ships will carry about 10,700 men.

In mid-1957 the Fleet strength was approximately 970 vessels supported by 670,000 men, 70 per cent of whom were attached to Fleet commands. The first of the year will find the Fleet strength reduced to approximately 925 ships supported by 655,000 officers and enlisted personnel.

This readjustment in the Fleet structure has resulted in a "new look." The "ship of the line" of 20 years ago—the battleship—has been replaced by the *Forrestal* class aircraft carrier. The former *Fletcher* class and *Gearing* class destroyers that fought many battles in the Atlantic and Pacific during the war and then returned to fire thousands of rounds against North Korean targets, are being moved into the Mothball Fleet as 2800-ton *Forrest Sherman* class DDs arrive.

Frigates, guided missile cruisers and destroyers have found their way into the Fleet in company with nuclear-powered submarines, as the Navy adjusts to the march of time and progress.

The Fleet is in a constant state of turnover. Outdated vessels are replaced with warships fresh from the builder's yard. Others are converted for new missions while some are stricken from the Navy's list and scrapped.

Keeping a weather eye on the future, the Navy Department at the same time will be ordering new ships for future delivery. The Navy's 1958 Fiscal Year Shipbuilding Program calls for construction of three large and one small nuclear-powered submarine, a nuclear-powered carrier, seven guided missile frigates, five guided missile destroyers and one amphibious assault ship. The conversion program for the same

Headed for the Mothball Fleet — 1957 Ship Inactivation Schedule

USS *Iawa* (BB 61)
USS *New Jersey* (BB 62)
USS *Wiscansin* (BB 64)
USS *8adoeng Strait* (CVE 116)
USS *Smalley* (DD 565)
USS *Dortch* (DD 670)
USS *Hickox* (DD 673)
USS *Lewis Hancock* (DD 675)
USS *Charles J. 8adger* (DD 657)
USS *Stackham* (DD 683)
USS *Heerman* (DD 532)
USS *Monssen* (DD 798)
USS *Knapp* (DD 653)
USS *Wm. T. Powell* (DE 213)
USS *Earl K. Olsen* (DE 765)
USS *Heyliger* (DE 510)
USS *Edward H. Allen* (DE 537)
USS *Rizzi* (DE 537)
USS *Osberg* (DE 538)
USS *Johnnie Hutchins* (DE 360)
USS *Hemminger* (DE 746)
USS *Cross* (DE 448)
USS *Haas* (DE 424)
USS *John C. 8utler* (DE 339)
USS *Grady* (DE 445)
USS *George A. Johnson* (DE 583)
USS *Thamas F. Nickel* DE 587)
USS *Rombach* (DE 364)
USS *Weeden* (DE 797)
USS *Maurice J. Manual* (DE 351)
USS *Fass* (DE 59)
USS *William Seiverling* (DE 441)
USS *8ass* (SSK 2)
USS *Bonita* (SSK 3)
USS *Namakagan* (AOG 53)
USS *Laning* (APD 55)
USS *Ruchamkin* (APD 89)
USS *Earle 8. Hall* (APD 107)
USS *Llayd* (APD 63)
USS *8urdo* (APD 133)
USS *8assett* (APD 73)
USS *Weiss* (APD 135)
USS *Knudsan* (APD 101)
USS *Telfair* (APA 210)
USS *Algol* (AKA 54)
USS *Yancey* (AKA 93)
USS *Warrick* (AKA 89)
USS *Whiteside* (AKA 90)
USS *Uvalde* (AKA 88)
USS *Curtiss* (AV 4)
USS *Whitemarsh* (LSD 8)
USS *Ashland* (LSD 1)
USS *Orleans Parish* (LST 1069)
USS *Pender County* (LST 1080)
USS *Hampden Caunty* (LST 803)
USS *Iron County* (LST 840)
USS *Mineral Caunty* (LST 988)
USS *Orange County* (LST 1068)
USS *Fard Caunty* (LST 772)
USS *Kent Caunty* (LST 855)
USS *Hillsborough County* (LST 827)
USS *Lawrence County* (LST 887)
USS *Rail* (MHC 37)
USS *Owl* (MHC 35)
USS *Sanderling* (MHC 49)
USS *8obolink* (MHC 44)
USS *Minah* (MHC 14)
USS *Redhead* (MHC 48)
USS *Kestrel* (MHC 26)
USS *Ruff,* MSC (0) 54
USS *Redpoll,* MSC (0) 57
USS *Siskin,* MSC (0) 58
USS *Cardinal,* MSC (0) 4
USS *Grackle,* MSC (0) 13
USS *Grouse,* MSC (0) 15
USS *Hawk,* MSC (0) 17
USS *Harnbill,* MSC (0) 19
USS *Linnet,* MSC (0) 24
USS *Lapwing,* MSC (0) 48
USS *Larikeet,* MSC (0) 49
USS *Reedbird,* MSC (0) 51
USS *Rabin,* MSC (0) 53
USS *Seagull,* MSC (0) 55
USS *Goldfinch,* MSC (0) 12
USS *Crow,* MSC (0) 7
USS *Rhea,* MSC (0) 52

GOING?

year includes the conversion of three cruisers for guided missile duties; reworking of seven Liberty ships, four for radar picket duty and three as surveying ships; and the continuation of conversion work started last year on the aircraft carrier USS *Oriskany* (CVA 34)—see page 24. All the ships included in the 1958 shipbuilding and conversion programs will be delivered before 1962.

The application of the "new look" to the Navy in 1957 resulted in the last of the battleships being ordered to turn its bow toward the inactive force.

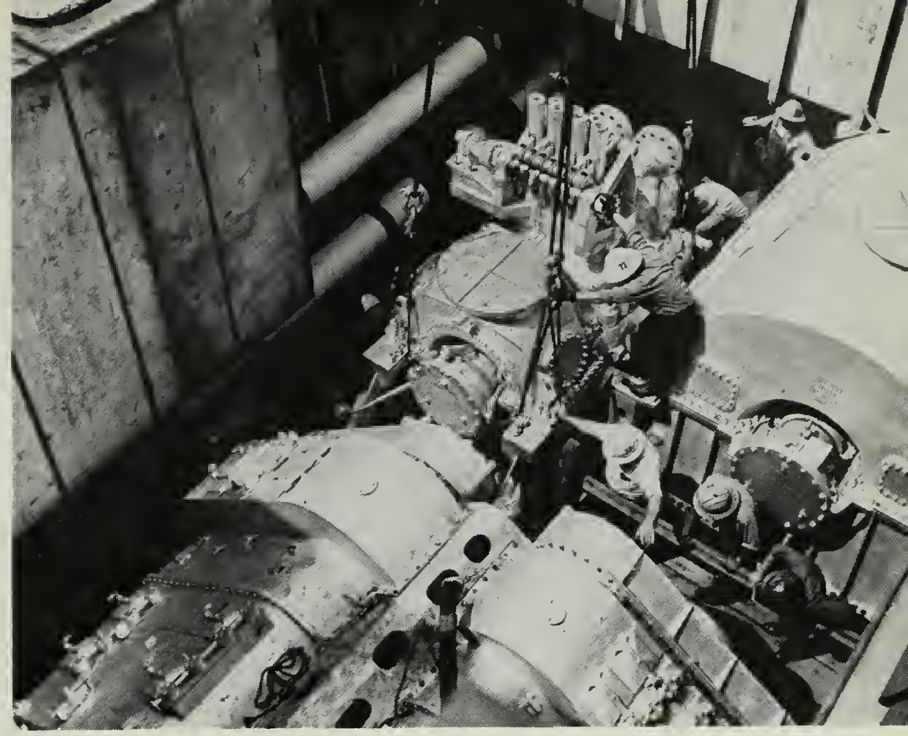
USS *Ranger* (CVA 61) the largest warship afloat, joined her sisterships *Forrestal* (CVA 59) and *Saratoga* (CVA 60) in August, while the escort carrier USS *Badoeng Strait* (CVE 116) left the naval service early in the year.

Nine destroyers will have left the Fleet by 31 December along with 19 DEs, 24 minecraft, 26 amphibious ships, one seaplane tender, an AOG and two SSKs. The two submarines are *USS Bass* (SSK 2) and *Bonita* (SSK 3), both delivered in 1952.

Ships delivered or expected by the Navy before the end of the year include *Ranger,* the nuclear-powered submarine *USS Seawolf*, SS(N) 575, six destroyers, eight destroyer escorts, nine minecraft, one ammunition ship, six amphibious warfare ships and, returning to service after conversion work, is *USS Albemarle* (AV 5), *Midway* (CVA 41) sporting an angled deck conversion and four DEs converted for radar picket duties.

The years ahead hold equal promise for increasing the "new look" in the Fleet. In 1958, 42 new ships will be delivered along with six others that have completed conversion periods. The following year will see 40 new vessels added to the Navy rolls and six more conversions completed. The year 1960 has 22 new ships scheduled for completion and 1961 has two. Of course future shipbuilding programs will increase the deliveries scheduled in 1959, '60 and '61.

The new Fleet units acquired during 1957 and the ones which will be added between 1958 and 1960 are



MOTOR MEN—Ship builders at New York Naval Shipyard swing high-pressure steam turbine into place in no. four engineroom of *USS Independence.*

A Look at Things to Come — Ships Under Construction

DELIVERY YEAR (CALENDAR YEAR)

Type	1958	1959	1960*	1961*	Total
AE Ammunition Ship		3			3
CG(N) Nuclear Guided Missile Cruiser			1		1
CVA Attack Aircraft Carrier	1		2		3
DD Destroyer	5	3			8
DDG Guided Missile Destroyer			7	1	8
DE Escort Vessel	2	3			5
DLG Guided Missile Frigate		2	7	1	10
LCU Utility Landing Craft	3	6	1		10
LST Tank Landing Ship	4				4
MSC Minesweeper, Coastal (nonmagnetic)	4	17			21
MSI Minesweeper, Inshore	2				2
MSO Minesweeper, Ocean (nonmagnetic)	4				4
SS Submarine	1	2			3
SS(N) Nuclear Power Submarine (2310 tons)	3	1			4
SS(N) Nuclear Power Submarine (2850) tons)	1	1	4		6
SSG Guided Missile Submarine	2				2
SSG(N) Nuclear Power Guided Missile Submarine		1			1
SSR(N) Nuclear Power Radar Picket Submarine		1			1
YP Patrol Vessel	10				10
Total	42	40	22	2	106

NOTE: In 1957 a total of 38 ships are scheduled to be delivered, of which 21 have already been received by the Navy as of 1 Aug 1957.

*Delivery totals for 1960 and 61 will be increased as future shipbuilding programs are instituted.

Shipbuilding Program: Fiscal Year and Number Authorized

Ship Type	1953	1954	1955	1956	1957	1958	Total
AE Ammunition Ship		2		2	1		5
AF Store Ship	2						2
CVA Attack Aircraft Carrier	1	1	1	1	1		5
CVA(NI Nuclear Power Attack Aircraft Carrier						1	1
CG(N) Nuclear Guided Missile Cruiser					1		1
DD Destroyer	3	3	5	7		5	23
DDG Guided Missile Destroyer					8		8
DE Escort Vessel	2	2	8	2	2		16
DLG Guided Missile Frigate				6	4		10
DL Frigate						7	7
MHC Minehunter, Coastal		1					1
MSC Minesweeper, Coastal (nonmagneticl	20						20
MSI Minesweeper, Inshore				2			2
MSO Minesweeper, Ocean (nonmagneticl	10	4	3				17
SS Submarine		1		3			4
SS(NI Nuclear Power Submarine	1		2	3	6	4	16
SSG(N) Nuclear Power Guided Missile Submarine				1			1
SSG Guided Missile Submarine	1		1				1
SSR(N) Nuclear Power Radar Picket Submarine				1			1
AKA Attack Cargo Ship		1					1
LPH Amphibious Assault Ship						1	1
LSD Dock Lanking Ship		2	2				4
LST Tank Landing Ship		1	6				7
LCU Utility Landing Craft			2	10	3		15
YRBM Submarine Repair, Berthing and Messing Barge			4				4
YP Patrol Vessel				5	5		10
Total	40	18	34	43	31	18	184

the results of shipbuilding programs that extend back to Fiscal Year 1953 when 40 new ships were authorized. Eighteen new ships were in the program for 1956 and 31 for Fiscal Year 1957.

During these years, orders were placed for five of the *Forrestal*-type CVAs, a nuclear-powered cruiser, 18 destroyers, eight guided missile destroyers, 16 missile-equipped frigates, 16 DEs, four conventionally powered submarines including two missile boats, 14 atomic-powered subs including one missile and one picket type, 40 minecraft, 27 amphibious ships and 21 miscellaneous types.

These ships, coupled with those authorized for Fiscal Year 1958, will be the backbone of tomorrow's Fleet. The Navy's conversion program has also given additional punch to the Atlantic and Pacific Fleets. The converted former *Essex*- and *Midway*-class carriers are examples of the modification work being done as well as the guided missile cruisers USS *Boston* (CAG 1) and *Canberra* (CAG 2). Twelve of the former *Essex*-class carriers have received the angled deck modifications while another, *Oriskany*, is at present undergoing conversion. Two of the three *Midway*-class carriers have already completed their conversion yard period with the last one scheduled for completion in 1959.

In 1958 two of the converted DER models, two *Talos* missile-equipped light cruisers, a Fleet ballistic missile ship designated as a "miscellaneous auxiliary", and an attack transport will leave the ship yards. Four more guided missile light cruisers, one with *Talos* and three *Terriers* will be added in '59.

The future of the nuclear Fleet is bright. By 1961 the present nuclear-powered force of two submarines (*Nautilus* and *Seawolf*) will have expanded into a force numbering 21. Included will be a nuclear-powered carrier, a nuclear cruiser, and 19 nuclear submarines. Many of the underwater craft will have missile-firing capabilities.

The Navy's future in this atomic age was best summarized by Admiral Arleigh Burke, *USN*, Chief of Naval Operations, when he said, "Naval power with its tremendous combination of swift mobility, long range and concentrated firepower is an indispensable element in projecting and applying the total military strength of the United States anywhere in the world.

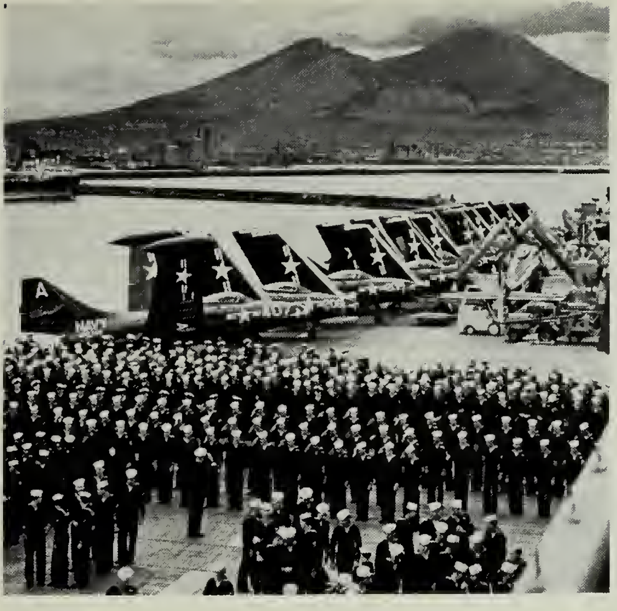
"These wonderful innovations—nuclear power, nuclear weapons, supersonic aircraft, guided missiles—are the harbingers of the Navy of the future. They hold the promise of the new Navy of fantastic power, range, and mobility—a Navy which will prove equal to the greatest challenge the maritime world has ever faced. The future is limited only by our imagination and our zeal."

—Bill Prosser, JOC, USN

Joining the Fleet This Year — 1957 Ship Delivery Schedule

Note: This listing includes six ships completing conversion and 32 new construction hulls

USS *Mauna Kea* (AE 22)
USS *Albemarle* (AV 5I
USS *Midway* (CVA 41)
USS *Ranger* (CVA 61I
USS *Manley* (DD 937I
USS *Davis* (DD 937)
USS *DuPont* (DD 941)
USS *Jonas Ingram* (DD 938)
USS *Bigelow* (DD 942I
USS *Blandy* (DD 943)
USS *John Willis* (DE 1027I
USS *Van Voorhis* (DE 1028I
USS *Lester* (DE 1022I
USS *Evans* (DE 1023)
USS *Hartley* (DE 1029I
USS *Bridget* (DE 1024)
USS *Bauer* (DE 1025I
USS *Joseph K. Taussig* (DE 1030I
USS *Newell* (DE 322)
USS *Thomas J. Gray* (DE 326I
USS *Ramsden* (DER 382I
USS *Mills* (DER 383)
USS *LCU 1608*
USS *LCU 1609*
USS *Monticello* (LSD 35)
USS *Suffolk County* (LST 1173)
USS *Grant County* (LST 1174I
USS *York County* (LST 1175)
USS *Adroit* (MSO 509)
USS *Stalwart* (MSO 493I
USS *Swerve* (MSO 495)
USS *Sturdy* (MSO 494I
USS *Advance* (MSO 510I
USS *Affray* (MSO 511)
USS *Bittern* (MHC 43I delayed from 1956
USS *Seawolf*, SS(NI 575
USS *YMP 3*



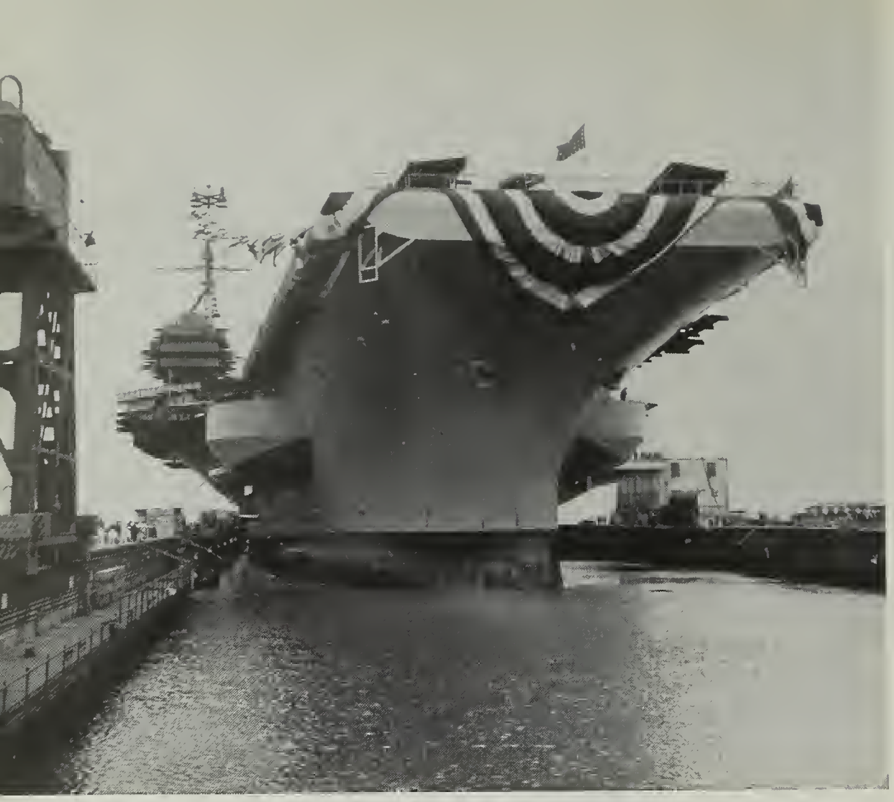
Heading for Port

For those of you who would prove the old salty slogan, "Join the Navy and see the world," here is a group of photos of faraway places that should be easily recognizable.

Your ship has undoubtedly dropped anchor in more than one of these ports, if not all. The views might be a little different in some cases from that which you had while waiting for the liberty launch or while you looked out to sea from the high point of a sightseeing tour. Even so, they should start the liberty yarns spinning around the "joe" pot.

Those of you who have not yet been on a world cruise can get an idea of what it will be like to see some of the foreign ports.

Top: Whitchats prepare for liberty as carrier sits in harbor at Naples, Italy. *Top right:* Crew looks toward Sydney harbor bridge as ship approaches the Australian port. *Right:* Destroyers pause while Navymen enjoy liberty in the tiny land of Monaco. *Lower right:* Harbor at Victoria, Hong Kong, welcomes U.S. ships. *Bottom:* Busy port of Valencia is stopping-off point for good liberty. —Charles Robertson.



A SHIP IS BORN — 'USS

MY NAME IS RANGER, USS *Ranger* (CVA 61) that is. I don't imagine many of you have met me yet because I'm pretty new. I shipped into the Navy in August at Portsmouth, Va., and I'm still feeling my way around, getting fitted out and taking part in local operations before the big shakedown cruise. I guess I'm still in boot camp so far as you are concerned.

You never heard a ship talk! We all do. We speak with the voice of our crew and in this case it's 2500 officers and men. They sure are a good group. Got a lot of spirit and I'm really picking up some of that esprit de corps I've heard so much about. This bunch brought me through the commissioning ceremony and into the Navy.

I was built at Newport News, Va., in a civilian yard (the Newport News Shipbuilding and Drydock Co.), the same place where they built my daddy, USS *Ranger* (CV 4). He was the Navy's first ship designed and built from the keel up as an aircraft carrier, but that's the only way I resemble him. I'm four times heavier and 200 feet longer. I can move faster over a greater distance and my planes and guns can do more damage when I arrive.

Maybe it's not for me to say, but I think I've got a lot of stuff. It took 5000 men three years to build me. They melted more than 2400 miles of welding rod into my seams to hold together the 53,000 tons of steel that form my hull and decks. They strung 290 miles of electric cables through my hull and drilled holes for 2300 telephone installations. And those riveters! I thought they would never stop pounding lumps on me. More than 200,000 before they had finished. But I lived through it, my headache is gone, and here I am, a United States Ship.

I sure was proud about all the nice things they said about me when I was commissioned. ADM Arleigh A. Burke, USN, Chief of Naval Operations, called me the most powerful warship in the world and I guess I am at that. He should know.

My engines whip up more than 200,000 horsepower and, for a young boy my size, I can really move. The Navy is being modest when it admits I can exceed 30 knots—which, for a 60,000-ton ship, is pretty fast. In normal operations I will have a complement of more than 100 fighters and bombers, ranging from the A3D *Skywarrior* heavy attack bomber to the supersonic F8U *Crusader*.

THE COMMISSIONING activities were really something. But during the months leading up to the actual ceremony, I felt sorry for my crew. They started arriving last March and about 500 came over to the shipyard to serve as a nucleus crew. Others were scattered all over, going to school or working at various locations. They were going to indoctrinate the rest of the crew, so these officers and senior petty officers had to learn where everything was and what was being put into me so they could teach the rest.

I rather think they liked me from the start. Workmen were swarming all over the place welding, painting and putting on the finishing touches, but it was nice to see my own people. Made me feel that I was beginning to belong.

They went to work in an office building at the builder's yard, handling paperwork, and it sure took mountains of it to get me into shape. Ship's organization had to be worked out and they started on the Watch, Quarter and Station Bill. They didn't have enough men to assign to the stations, but the men were on the way.

If you have never been in a precommissioning detail you won't know what its like. Most sailors starting a tour of sea duty move into an established pattern. In my case, as with all new ships, everything had to be done from scratch. File systems had to be established, sets of instructions obtained, along with manuals and other publications. Areas of responsibility had to be assigned. Who was going to clean the passageway leading to an engineering space? What divisions were going to sleep where? The plans called for a fire hose here. Who would man it?

I think organization like this starts from the top. The captain, representing the ship, organizes himself and his staff. The staff organizes each department and that in turn provides the basis for the division organization. In the division each man applies this organization to his own duties aboard the ship. It was a big job getting set up, but it went smoothly, thanks to the crew. As I said before, you couldn't find a better group.

THEY ARE PROUD of being ordered to *Ranger* because I am the eighth ship to carry this distinguished name. The seven *Rangers* before me had served the Fleet well, but after completing their missions had gone the way of all ships. I suppose I will myself someday but that's far in the future. I like to think of myself as a living monument to their achievements and to the growth of the Navy from the days of its birth to the atomic, supersonic, electronic organization of today.

RANGER'

I have quite a line of ancestors. My great, great, great, great, great grandfather sailed under the command of John Paul Jones. His appointment as skipper of my great (four more times) grandfather came on the same day that the Congress recognized the first flag of the United States. It was this flag, flying from the first *Ranger's* rigging, that received the first salute rendered to this country by a foreign nation.

Sailing under this same flag, the 18-gun continental frigate (called, by some people a sloop) captured two prizes in 1777 and, in 1778, defeated the heavier gunned British sloop-of-war *Drake* in a pitched battle.

Next on the *Ranger* family tree came an armed schooner followed by a 14-gun brig. *Ranger* Number Four, a full rigged iron gunboat with auxiliary steam power, stayed on the Navy's list from 1876 until 1940, which is something of a record in itself. It served as a school ship under the names *Rockport* and *Nantucket* from 1908 until stricken from the list. The fifth ship to bear the name was an anti-submarine vessel and number six was a minesweeper. Then along came my father and the father of our entire aircraft carrier force as we know it today, CV 4.

Yes, sir, that was a *Ranger* that ranged far and wide between 1934 and 1946. I hope I can do as well. The first landing on its deck was made by the late Fleet Admiral Ernest J. King, USN, then Chief of the Bureau of Aeronautics. CV 4 served for a time as a training vessel, but it was in 1943 that the most noted event of its career took place. Steaming into enemy waters off the coast of Norway, *Ranger* sent more than 40,000 tons of Nazi shipping to the bottom. This, only a short time after the Germans had reported CV 4 sunk.

During most of the war my father was the only aircraft carrier in the Atlantic. *Ranger* planes covered the initial assault at Casablanca and when work was completed in the European theatre, CV 4 joined the Pacific Fleet.

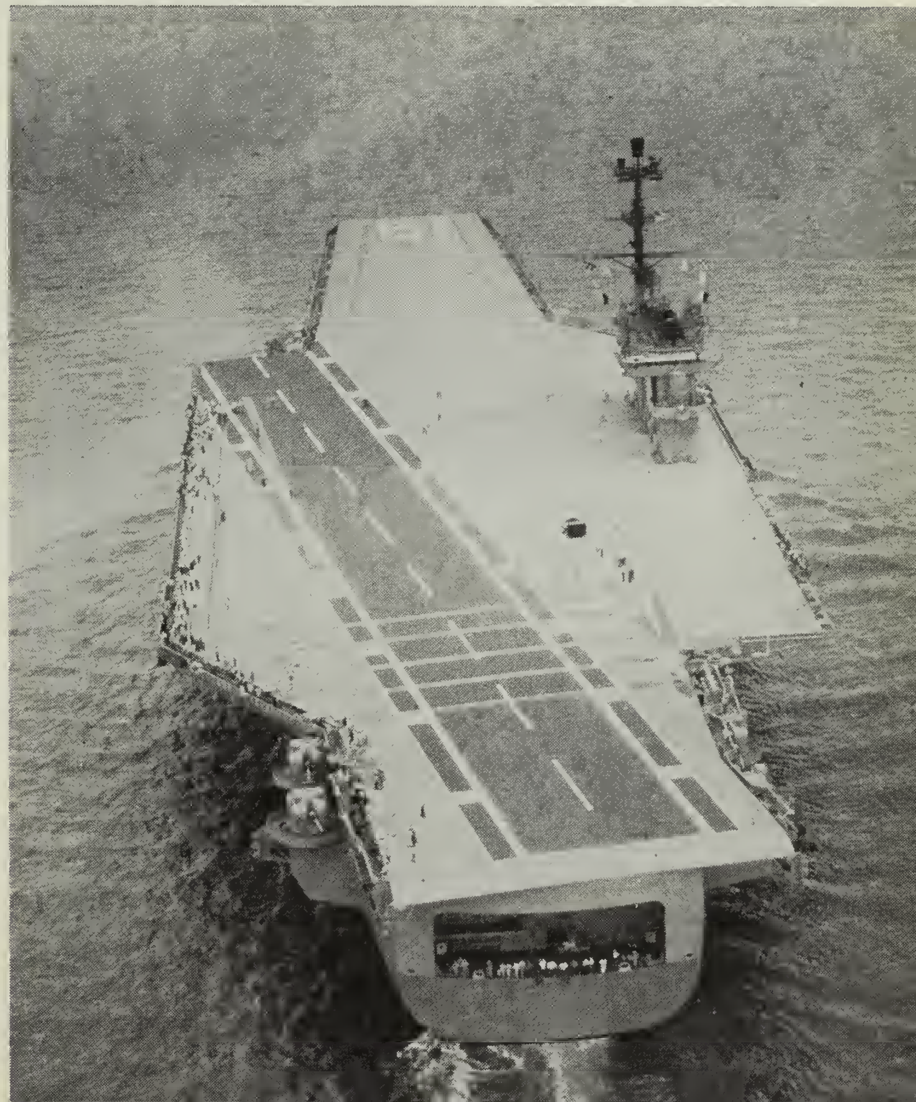
How did it all end? Well, the first American carrier to cross the Arctic Circle, the first carrier to have a jet-propelled plane landing and the carrier that logged the second greatest number of landings was sold for scrap. Yes sir, USS *Ranger* (CV 4) which came through World War II without being hit by a single bomb, torpedo or shell was finally beaten by time—but with missions completed.

MY CREW KNEW all this when they reported on board so they had a built-in-pride and when I completed all my sea trials with flying colors they knew they had a good ship.

While I was still being completed most of the crew was learning the latest methods of doing things the Navy way. They went to damage control, ABC, fire fighting and a whole list of other Fleet training schools so they would know how to use my new equipment when they came on board.

Back at the office, plans were being made for commissioning day, the day when I would officially join the Navy. Kind of like being sworn in. An invitation list was made up,

DOWN TO THE SEA — Resembling a stretch of super highway *USS Ranger* heads out to sea on trials to test her performance before joining the Navy.



FAMILY TREE — First *Ranger* defeats *Drake*. *Right:* Number four *Ranger* remained in Navy from 1876 until 1940.

guest speakers invited, bands arranged for and a flyover requested. Each member of my crew was allowed to invite as many guests as he desired so a big crowd was expected for the ceremony. But I'm getting ahead of my story.

You know they laid my keel in a drydock on 2 Aug 1954. When my shipmate the USS *Forrestal* (CVA 59) was launched they floated the completed portion of my hull into the dock she had vacated. I was christened and launched in September of 1956. That was the day I really became a ship. I was floating—and when the traditional bottle was smashed against my bow I was pulled into the stream. Everybody cheered and whistles blew.

TORCH SONG — Welders melted more than 2400 miles of welding rod into *Ranger's* seams to hold together 53,000 tons of steel that form hull and deck.

They moved me down to another dock where they added the final touches and then in July they said, "*Ranger,* we think you are ready. Now let's go to sea and find out."

A CREW OF 1600 shipyard workers (all civilians, you know), came aboard and prepared to take me out to sea. The day we left, about 225 members of the Navy crew came on board to observe the tests that I was about to run. This was called the Builder's Trials and it would last more than two days. The builders were going to put me through my paces to see if I had developed any flaws or if they had made any mistakes.

Well, I want you to know I *worked* during that short trip to sea. I hope my Navy crew didn't get ideas. They watched how fast I drank fuel oil at cruising and at full speeds. They made me dizzy turning in the tightest circle possible and jumped my turbines into full astern while going ahead at nearly top speed. Very neurotic-making. Then they checked everything else to make sure it was working right.

During these trials I began to develop cold chills in one part of my hull while other parts were burning up. An investigation showed that the work of the seven different air conditioning systems aboard was not coordinated. One unit was sending the temperature down in one area and not another. These units are capable of completely air conditioning two Empire State Buildings and so a lack of initial adjustment was understandable.

I developed a few more aches and pains during the voyage, but who wouldn't? It was my first time at sea and I had really been put

CARRYING ON — Old *Ranger* (CV 4) was first ship to be built as a carrier. *Right:* CVA 61 has a lot to live up to.

through my paces, but I did the family name proud. My prospective commanding officer said that I responded beautifully to the wheel. I think he was really satisfied and I know the builder was.

ABOUT THIS TIME people started comparing me with my shipmates *Forrestal* and *Saratoga* (CVA 60). I was longer than CVA 59 and about the same as *Sara*. Down below the water line I sported only two rudders, both weighing 45 tons. The other two ships in my family have three rudders (two of 45 tons and one smaller one). My island was changed from those worn by the others. I have only one mast and a slanted stack top, while they are flat across the top with two masts.

My weapon handling system is improved and my port elevator is made entirely of aluminum. That, by the way, is the world's largest welded aluminum structure. Weighs about 105 tons. Way down deep in my engineering spaces you will find new types of turbines. They run at higher pressure and temperature than those on *Forrestal*. They decrease my fuel consumption.

After we got back to my berth at Newport News they fixed up the minor ailments, including the air conditioning system, that I had incurred during the Builders Trials. A couple of weeks later the Navy's Board of Inspection and Survey arrived for the Navy Preliminary Acceptance Trials. I was going to sea again, this time for four days. These officers, each one an expert in his field, had to decide if I was ready for service with the Navy and to find the faults, if any, in my construction or equipment.

I still didn't have my permanent Navy crew when we went out for the acceptance trials, but I did the best I could. A crowd of harbor tugs pushed and pulled me away from the dock and into deep water. When I got underway down the channel a small force of Coast Guard patrol boats surrounded me, insuring that I received the proper respect due a ship of my ancestry and, on second thought, my size. Going down Thimble Shoals Channel I heard the pilot say that it was only 500 feet wide. I have a beam of 252 feet which looks good to an aviator, but doesn't leave much room for passing in a narrow channel.

The Coast Guard kept everybody out of my way and stopped traffic in the channel just as they did when I went out for my Builder's Trials. Once out to sea, I sighted my escort, the radar picket destroyer USS *O'Hare* (DDR 889), who stayed with me until the trials were over and I was safe back in port. She had been my escort during the earlier trials. One of my oldest Navy friends.

THE BOARD REALLY put me through my paces and I don't think they missed a spot. Did you ever stand an inspection where the skipper looks up one side and down the other, peers into each seam and pocket and asks you questions about your work or the Navy? Well, that is just what happened to me. They crawled around in spaces I didn't even know I had and tried out every piece of equipment that had been installed.

Damage control officers looked over the fire fighting gear and pumped thick clouds of foam over the side. Medical officers checked the hospital and dental area before launching a sanitary inspection. Down in the fire room engineer officers kept a close watch on my boilers, turbines and the operation of every bit of associated gear.

My windlass screamed as the inspecting officers let my 30-ton anchors, suspended on chains with links weighing 360 pounds, roar out into 55 fathoms of water. As the brakes took hold to stop the rushing fountains of steel the whole forecastle strained and as the windlass began pulling the mass of metal back on board I thought my bow was going to rip off. On the bridge cold water from the window washing system poured over the tinted glass and was sprayed onto my paint work by the windshield wipers as they were turned on for testing. The hangar deck echoed with a loud rumble as the hangar division

POW! — *Ranger* gets dash of champagne from Mrs. Arthur W. Radford during christening at Newport News.

NAVY CREW on board for familiarization and training while their carrier was under construction. *Below:* Finishing touches are made to *USS Ranger.*

door was opened and closed and the refrigeration and scuttlebutt systems worked overtime as they came under the scrutiny of the Board.

Down in the engineroom full speed was rung up and for four hours I charged through the sea at top speed and then I was thrown into tight high-speed turns which twisted my hull, strained the frame members and caused me to roll 15 degrees.

And then it happened. Full astern was rung up. As the more than 200,000 horsepower was reversed I could feel every part in my turbines absorbing the blow. My propeller shafts screamed as the five-bladed props took a firm bite and began to stop my forward motion. It seemed like forever before they stopped the forward charge of my 60,000 tons, but according to the Board I made the crash stops and also the quick reversals in excellent time. I'm glad they liked it, but I hope they don't form a habit. It didn't cause any physical damage but my psyche will never be the same. With full astern indicated on the engineroom telegraph I went charging across the sea backward on an endurance run and then swung into more hard left and right maneuvers. The Board knew that I would never be faced with maneuvers such as this in normal operations, but they wanted to see if I had the necessary stuff for an emergency. I showed them I did.

The Board members observed the night lighting on the flight deck and watched the operation of the tailor shop, cobbler shop and Marine press shop equipment. All of my flight deck gear was checked including the four steam catapults, the arresting gear, bomb elevators and jet blast deflectors.

I tell you this, the Navy Acceptance Trials are the most complete physical that a ship can be given. When the Navy puts the stamp of acceptance on your hull, you are the best ship possible. The Board even got a chance to watch me in rough weather, not a hurricane, but plenty of rain, wind and wave action. Felt real good to meet the sea and those high waves didn't bother me.

We headed back to port after completing the four days of sea trials 12 hours ahead of schedule. I understand that the Preliminary Acceptance Trials were highly successful—in fact they were so good that Secretary of the Navy Thomas S. Gates sent my builders a letter of congratulation.

When I returned to the civilian yard a few last minute details were taken care of and the discrepancies noted during the trials were repaired. It was about this time that supplies *really* began to arrive on board. I heard the Supply Officer talking to some magazine person one day and he said that we would have about $310,000 worth of general stores items aboard when commissioning day rolled around and that did not include clothing, provisions or ship's store goods. I understand that it included nearly

6000 items, with all but 300 loaded in quantities sufficient for two years.

He called this "endurance loading" which would increase my combat readiness and provide a great dollar saving too. The Supply Officer said that a study had been made of the two-year supply usage data of other attack carriers to arrive at the selection of general store items that would be ordered for two years. In doing this the number of different items stored on me was reduced to about half of what you would find aboard one of my other type-ships.

An example of this saving can be found in my many file cabinets. There you will find only one type and color of folder. Most other Navy ships carry five or six different types. The space saved by carrying only one, allowed them to load enough aboard for two years. Of course the stock will be replenished every quarter, but I'm ready for a long cruise to far-off waters any time. I've got plenty of file folders.

Having a supply system like this allows for "one stop shopping" instead of the complicated stub requisition system.

As I understand it, each department or division will have one petty officer designated as the supply P.O. He will find out what his division needs and go down to the supply room where he will tell the man his troubles. The supply clerk will fill out an invoice similar to those used by auto part distributors, get a signature and issue the needed equipment. I think that a system like this will stop hoarding because each department will know that the supplies will be available when needed. Also, all of the departmental supply spaces have been given to the Supply Department.

They saw to it that my library was well stocked with books. About 3800 volumes worth about $9000, were brought aboard. The Chaplains conducted their first services on the Sunday after commissioning. I was ready for my crew, now.

By early August the majority of my crew had arrived and about 110 officers had reported. The crew moved across Hampton Roads and occupied quarters on the ship in August. The first meal served from my galley was at noon on that day. It was a good feeling to have those men on board and I felt even closer to the Navy when I could hear the word being passed through the ship and feel the crew moving about.

I remained a "civilian ship" until the next day when the civilian crew backed me out of the Newport News berth and with an escort of tugs and Coast Guard boats, steamed me across Hampton Roads where *Monitor* and *Merrimac* fought, up the Elizabeth River and backed me into berth five at the Naval Shipyard. As I slipped into my spot alongside the pier I was within hailing distance of *Forrestal*. Her crew was out on deck to give me a welcome and to see what the newcomer to the Fleet looked like.

As my last line was doubled up and the civilian crew started ashore, the Commandant of the Fifth Naval District handed a letter to the builder's representative accepting the ship for the Navy. I didn't realize it then, but that piece of paper was worth about $180 million because that is what it cost to build and equip me. I was now the property of the Navy and was soon to be a commissioned member of the Fleet.

ON TRIAL — Civilian crew takes the wheel of *Ranger* to put her to the first tests to check seaworthiness.

Those last 48 hours were rugged for my crew. During that period they had to execute the plans drawn up weeks before for the commissioning ceremony. Replies to the invita-

HAPPY DAY — *USS Ranger* has passed her physical and joined the Navy. Her deck towers above houses as she invites community on board to celebrate.

BIG CHANGE — Carriers have been important in the Navy since these planes winged from deck of CV 4. *Below:* CVA 61 has single mast and slanted stack.

tions indicated that thousands would attend. The crew was as anxious as I to put on a good show before ADM Burke and Secretary Gates, and ADM Arthur W. Radford, USN, (Ret.), then Chairman of the Joint Chiefs of Staff, who had accepted an invitation to be the guest speaker. (It was Mrs. Radford who christened me when I was launched.)

THE SPEAKERS' platform was set up on my flight deck where the ceremony was going to be held, along with stands for newsreel and TV cameramen. As the hours slipped past, thousands of chairs were carried to my flight deck and placed in formation on my wide runways.

Boxes of programs had been brought aboard along with napkins, reception menus and match box covers, each one bearing my insigne. This emblem, which identifies me, has its roots buried deep in the heritage of the *Ranger* name.

Based on the insigne of CV 4, the emblem is basically a shield with the upper portion a field of blue holding seven gold stars. These stars are symbolic of the first seven ships to bear my name and also is the number of stars in the Commission Pennant. Diagonal red stripes cover the lower two thirds of the shield, surrounding a figure of the Revolutionary War Minuteman. Beneath the shield are the words "USS RANGER CVA 61" displayed on a ribbon of gold.

This is the insigne that I will be known by in future years of service.

After the nearly 8000 guests arrived and were seated, the official party took its place on the speakers stand in front of the island and the ceremony began. The Ensign, Union Jack, and Commissioning Pennant were hoisted with the playing of the National Anthem, the skipper assumed command of the ship and the watch was set. I was a commissioned member of the finest Navy in the world.

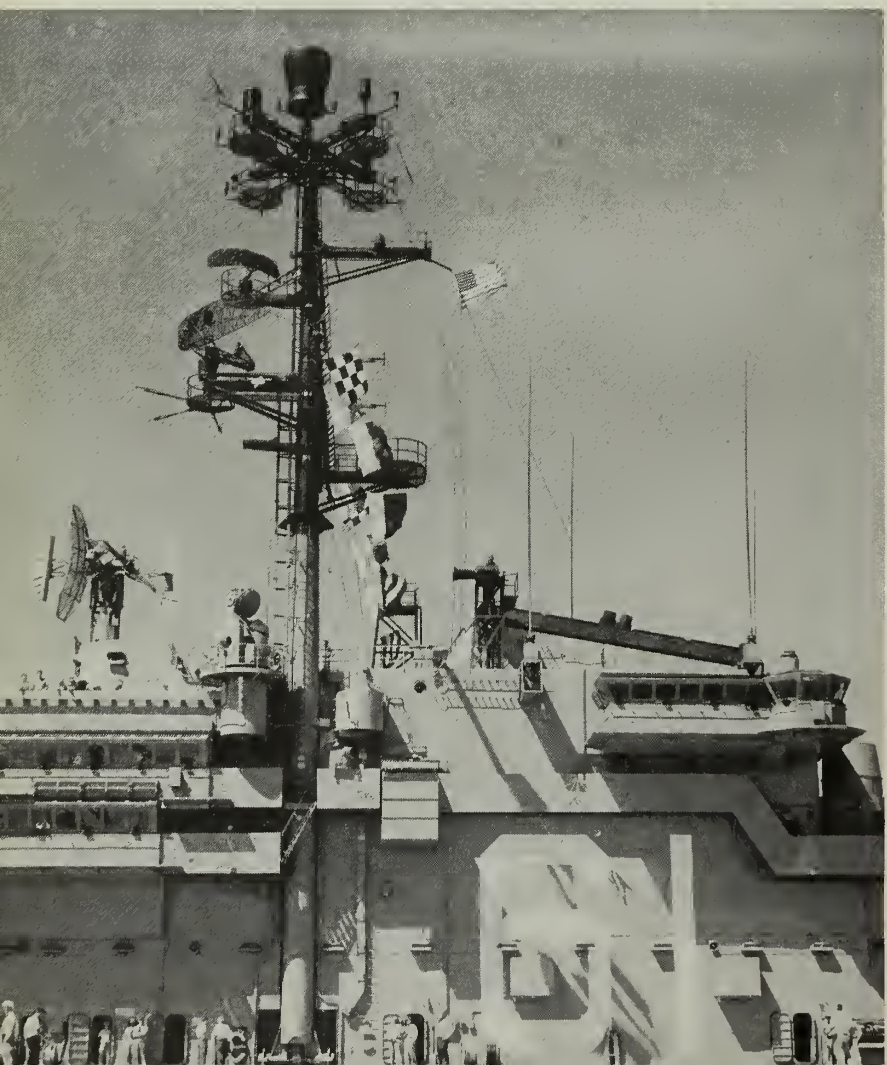
At the end of the ceremony Mrs. Radford presented my crew with two presents: a framed map of the world on which to log my voyages, and a painting showing the first *Ranger* receiving the first salute ever rendered to the flag of the United States.

It was during the ceremony that I first learned that I was going to join the Pacific Fleet next summer. I'll be the first ship of my class to steam with PacFlt and I'm sure that my added capabilities will strengthen the already fine carrier force operating there.

Well I just wanted to introduce myself and give you an idea of what happens before a ship is commissioned and all the work that the crew must do even before their ship is an official part of the Navy. But most of all I wanted to let you know that the traditions established by John Paul Jones on board the first *Ranger* will be continued on board this *Ranger*, the eighth United States warship to bear the name.

This is my story, as told to

—William Prosser, JOC, USN.



VP Squadron's VIP

Primarily a skilled machinist's mate, usually a petty officer and always a leader—the Navy patrol plane captain must be and is trusted by those who depend upon him.

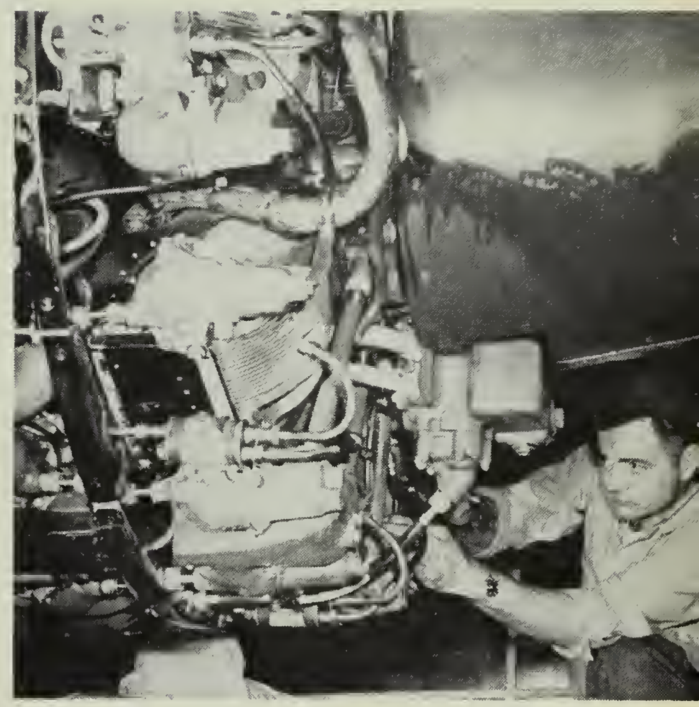
From rocker box drain to hydraulic strut, from wing tank to tail turret, it's the plane captain's job to check the plane from bow to stern and see that its complicated equipment is functioning properly.

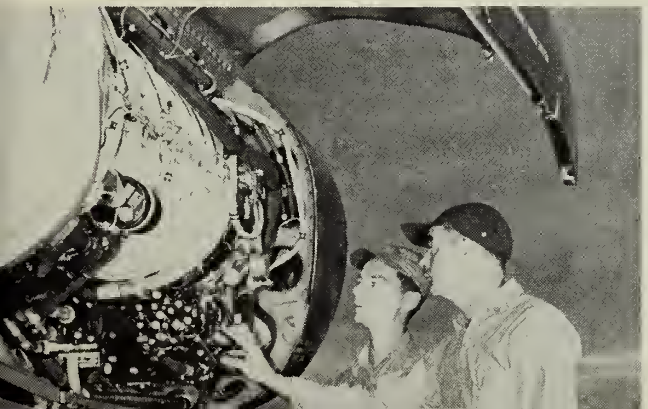
Several Navy squadrons of jet-boosted P2V-5F *Neptune* patrol planes based at Barber's Point Naval Air Station, Oahu, T. H., fly daily in the Hawaiian area. While based in this area these "VP" squadrons conduct training flights involving aerial reconnaissance, antisubmarine warfare and mining operations.

Of the enlisted crew members who assist the plane commander in forming a "flying team," the plane captain by the nature of his job stands closest to the skipper. For the plane commander knows that a "thumbs-up" from his plane captain means "take her up, sir!" He knows his aircraft is ready.

It's easy to reason why the Navy has established high qualifications for all prospective plane captains. For into his custody are placed the lives of his flying shipmates and an aircraft valued at over a million dollars.

Top: Whitehat works on No. '6' P2V-5F *Neptune* patrol plane before starting on mission. *Center:* Plane captain Jim Roark, AD1, USN, traces an oil leak near starboard engine during post-flight check. *Bottom right:* The plane commander, LT M. L. Claude, USN, establishes aircraft-to-ground radio contact, while Roark stands by at flight panel station where he has responsibility for maintaining and checking circuit breakers controlling electrical instruments. *Bottom left:* Jim must check and recheck every operational and structural part of the plane when it is on the deck.





Yard Talk

DER'S GO WEST— *USS Strickland* (DER 333), *Harveson* (DER 316), *Brister* (DER 327), *Fessenden* (DER 142) and *USS Joyce* (DER 317) arrive in Hawaii.

With the entrance of the attack aircraft carrier USS **Oriskany** (CVA 34) into the San Francisco Naval Shipyard for conversion, the Navy's *Essex* class modernization program draws to a close.

It was announced early this year by the Office of the Chief of Naval Operations, that *Oriskany* would be the last of the World War II type carriers to receive the angled deck and hurricane bow treatment. *Oriskany* will remain in the yard until late 1958, when she is scheduled for recommissioning.

During the 20-month conversion period, the cutting torches of yard employees will slice away a portion of her bow and heavy cranes will lift on a mass of metal which will give the ship the streamlined hurricane bow where steam catapults will be installed. The heavy lifting equipment will then move aft to add an angled deck overhang on the port side.

CVA 34 already boasts a strengthened flight deck and high performance elevators. When completed she will join her many sister ships of the *Essex* class which have received the conversion designed to equip them for the jet propelled, atomic age.

This carrier modernization program was the quickest and most economical means of producing attack carriers capable of operating high performance jet aircraft with safety, and has exploited to the maximum the Navy's large investment in its World War II carriers.

The current CVA-CVS force includes 28 ships, three of which are undergoing conversion work. In addition to *Oriskany*, the larger USS **Midway** (CVA 41) is undergoing modification work and will be commissioned this month while her sister ship, USS **Coral Sea** (CVA 43), will return to the Fleet in late 1959 wearing the new look. Both of these 45,000-ton carriers had three steam catapults installed to replace the two original hydraulic cats. They also received the angled deck and hurricane bow treatment sported by their sister, USS **Franklin D. Roosevelt** (CVA 42).

The Big Three in the CVA force are the three 60,000-ton carriers USS **Forrestal** (CVA 59), **Saratoga** (CVA 60) and the recently commissioned **Ranger** (CVA 61). However, numerically, the backbone of the attack carrier force is a modernized version of the *Essex* carrier series that came through World War II without a loss.

Twelve of the ships are now fitted with the angled flight deck and streamlined bow. They have played host to the Navy's most modern jets in both Fleets. Included in the listing of those fitted with steam cats are USS **Intrepid** (CVA 11), **Ticonderoga** (CVA 14), **Lexington** (CVA 16), **Hancock** (CVA 19), **Bon Homme Richard** (CVA 31) and **Shangri La** (CVA 38).

Six other long and short hull *Essex* types have improved hydraulic catapults instead of the new steam models. The class ship, USS **Essex** (CVA 9), heads this list of angled deck flattops which includes **Yorktown** (CVA 10), **Hornet** (CVA 12), **Randolph** (CVA 15), **Bennington** (CVA 20) and **Kearsarge** (CVA 33).

The entire nine-ship antisubmarine warfare support force is made up of *Essex* carriers, all veterans of thousands of miles of steaming. Included in the listing is USS **Boxer** (CVS 21) which has logged more than 79,000 landings, **Leyte** (CVS 32), **Princeton** (CVS 37), **Tarawa** (CVS 40), **Valley Forge** (CVS 45) and **Philippine Sea** (CVS 47). None of these axial (straight) deck carriers have received any of the modernizing touches such as those applied to USS **Antietam** (CVS 36) which received the first angled deck and hurricane bow, and **Wasp** (CVS 18) fitted with these same improve-

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ments, or **Lake Champlain** (CVS 39) which had its original flight deck strengthened, and improved hydraulic catapults installed.

The future of these *Essex*-class carriers, some of which date to 1942 and '43, has already been sealed. As new CVA types are commissioned (at present about one a year) they will slip into specialized assignments with the antisubmarine or amphibious forces. Some may go into the Reserve Fleet where they will stand by for future emergencies.

One new carrier joined the Fleet only last month, the 60,000-ton *Ranger*. The eighth ship to bear the name *Ranger*, she responded beautifully to the rudders as she went through her paces during builder and acceptance trials. Built at a cost of nearly $175 million, the new *Ranger* could hold three ships the size of the World War II *Ranger* (CV 4) side by side on her 252-foot wide flight deck. CV 4 had a beam of 80 feet.

With the commissioning of CVA 61 at the Norfolk Naval Shipyard, Portsmouth, Va., only three of the *Forrestal* class carriers are now under construction. They are **Independence** (CVA 62), **Kitty Hawk** (CVA 63) and **Constellation** (CVA 64). However, funds for a nuclear powered carrier have been requested in the 1958 fiscal year budget.

Forrestal has returned home after the first overseas deployment of this class of carrier. Some 65,000 visitors in 13 ports of call came aboard during her six-month tour with the Sixth Fleet. Carrying a force of A3D *Skywarriors*, F3H-2N *Demons*, FJ-3 *Furies* and prop driven AD *Skyraiders*, *Forrestal* steamed about 40,000 miles including trips into the Eastern Mediterranean.

Carrier Air Group One was embarked aboard the ship which served as flagship to RADM Murr E. Arnold, ComCarDiv Four.

Next assignment for CVA 59 and for *Lake Champlain* will be a restricted availability during the late summer and fall months. Both ships will occupy berths at the Norfolk Naval Shipyard.

Also in the yard is *Shangri La*, but it took the efforts of six Puget Sound Naval Shipyard tugs to move her into dry dock No. 4. Two of the tugs guided the ship onto the keel blocks while four others pushed against a barge pressing on the stern. She is scheduled to spend four months in Puget Sound while being overhauled.

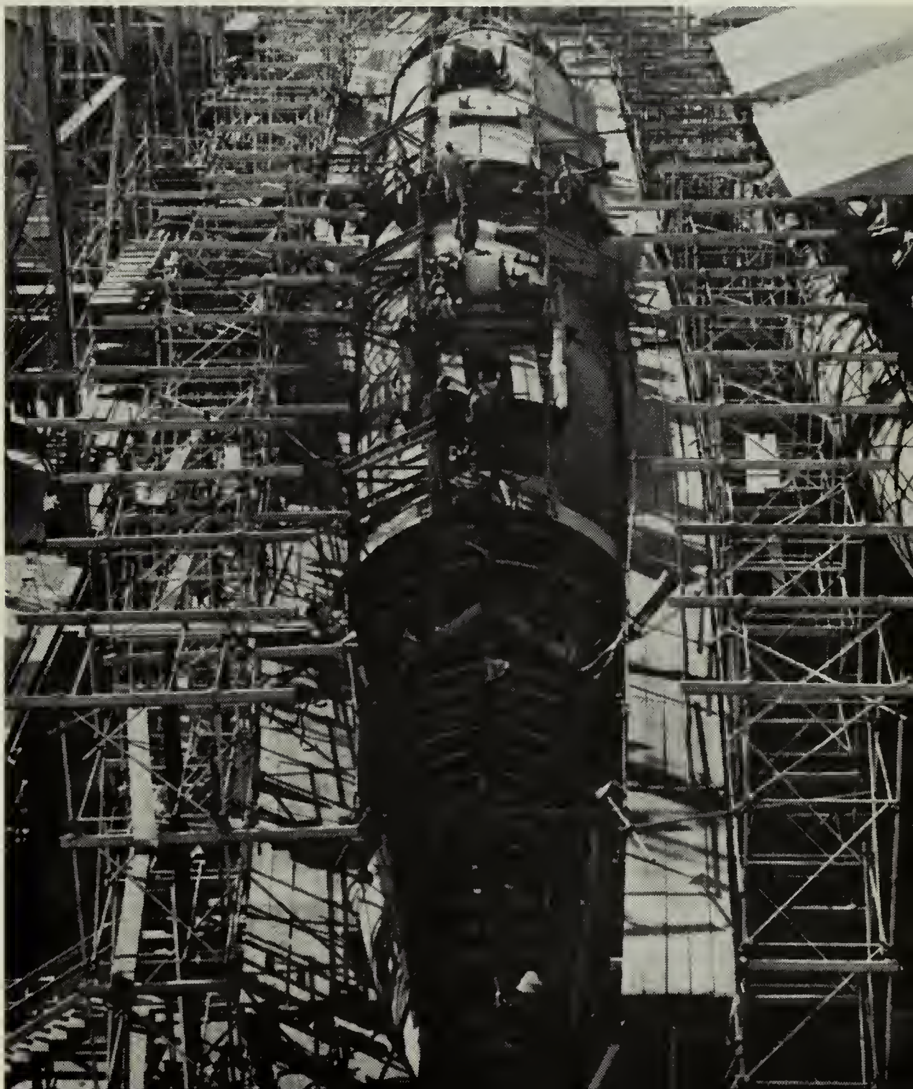
More than 6000 steaming hours logged since her last overhaul made the renewal of her superheaters necessary. Included in the revamping job on her eight boilers will be the installation of new fire brick and other work.

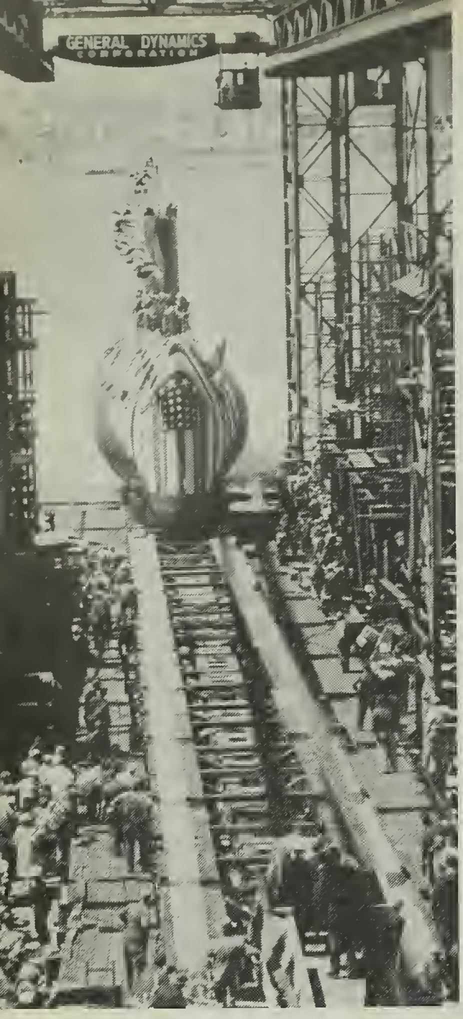
Saratoga has completed her first yard period since commissioning in 1956 and rejoined the Atlantic Fleet. Another large carrier, *Midway*, has had 284 miles of new cable installed during her recent conversion at the Bremerton Navy Yard. About 60 per cent of the new cable is of the unarmored type. Large power cable is the only application of armored types aboard CVA 41.

A four-month availability for *Bennington* will end in November after 70,000 working hours are expended making a total of 523 repairs and alterations to the ship. About 45 days will be spent in dry dock by CVA 20 in her first major yard period since 1954.

For two of the smaller types of carriers it was goodbye when the Colors, Union Jack and Commissioning Pennants of **USS Badoeng Strait** (CVE 116) and **Saipan** (CVL 48) were hauled down. Both were the last of their types, which played important roles in World War II. CVL 48 was the first carrier to operate with a squadron of jets in regular Fleet operations. She served in the Korean conflict; and twice took part

MORE ATOMIC POWER—Another nuclear powered submarine, *USS Sargo*, SS(N) 583, as she looked some time back. Sub is nearing her launching date.





DOWN THE AISLE—*USS Skate*, SS(N) 578, hits the water. The third atomic sub is to join the Fleet next year.

in Caribbean disaster area relief operations.

The passing of *Badoeng Strait* marks the active duty end of the 114 CVEs built during World War II. They gained fame at the battle of Leyte Gulf when four Japanese battleships, 10 cruisers and 12 destroyers fell on a force of five of these thin-skinned ships, plus seven destroyers. Heavy smoke screens were laid while the escort carriers and destroyers answered eight and 16-inch gun fire with their five-inch weapons. Despite overwhelming odds in their favor, the Japanese broke off the engagement, leaving the tiny force battered, but still breathing.

The Navy is also preparing to pipe over the side its last two remaining battleships, **USS Iowa** (BB 61) and **Wisconsin** (BB 64). *Iowa* is scheduled to leave the Fleet some time in 1958, but *Wisconsin* will enter the New York Naval Shipyard in October to begin the voyage to the mothball fleet. Sister ships in the 45,000-ton class are USS *Missouri* (BB 63) and *New Jersey* (BB 62), both already in reserve.

From the cruiser forces comes word that **USS Bremerton** (CA 130) is in the Puget Sound Naval Shipyard for an overhaul. Commissioned in 1945 she served for a short time with LantFlt before reporting to the Pacific in 1946. Placed in reserve in 1948, CA 130 emerged in 1950 for duty with the Seventh Fleet.

New hull numbers have been assigned to six light cruisers now under conversion for missile duties. **USS Galveston,** former CL 93, will join the Fleet in early 1958 as CLG 3. **Little Rock** (CL 92) will be CLG 4 and **Oklahoma City** (CL 91) will be number 5. The three are being armed with the Talos missile.

Terrier missiles are being placed on CLGs 6, 7 and 8. They are **USS Providence,** former CL 82, **Springfield,** ex-CL 66, and **Topeka** which carried the designation of CL 67 on active duty.

The heavy cruiser **USS Saint Paul** (CA 73) had welcome visitors on board for Sunday church services—16 of the lovely contestants in the "Miss Universe Contest." Cruiser Chaplain T. J. Richter made a formal request that more tours of this kind be arranged for every Sunday that his ship is in port. He claimed that services were never so well attended and that "this sudden turning to religion on the part of the men is very heartening and I didn't realize before that there were so many officers aboard . . ."

The girls next went to the hospital ship **USS Haven** (AH 12) where, it was reported, they caused gratifying therapeutic results. Never before, claimed their press agents, had so many bedridden patients suddenly become ambulatory.

Additional fire power has been added to the destroyer force with the commissioning of the 2800-ton **USS Jonas Ingram** (DD 938) and **DuPont** (DD 941). New automatic, rapid fire guns controlled by the latest in fire-control devices mark the ships as potent weapons. Available to the crew aboard the two ships will be the last word in submarine detection gear. Also packed into the 418-foot hulls are the latest habitability improvements designed to make the ships the most comfortable among destroyer types.

USS DuPont (DD 941) is the third ship to bear the name of RADM Samuel F. DuPont, a hero of the Mexican and Civil War. The first *DuPont* was a torpedo boat used to carry dispatches during the Spanish-American War. Sold in 1920, she was followed by one of the famous old four stack DDs that carried the name into the North Atlantic during the war and earned the Presidential Unit Citation for her convoy escort assignments. Her designation changed to that of a miscellaneous auxiliary, *DuPont* was used as a target vessel for fledgling torpedo bomber pilots before being sold after the war.

USS Ingram (DD 938) also bears the name of a famous admiral, Medal of Honor holder and former CinCLantFlt, the late ADM Jonas H. Ingram, USN. He was cited for "distinguished conduct in battle" during the Vera Cruz, Mexico, engagement, 22 Apr 1914. He landed with the battalion from the battleship USS *Arkansas* (BB 33) and, during the second day of fighting, the service performed by him was eminent and conspicuous. He was specially commended in reports for his skillful and efficient handling of the battalion's artillery and machine guns. ADM Ingram died in 1952, but his name will again be carried into the Fleet by DD 938.

In other construction news, names have been assigned to four more of the 2800-ton DDs now being built. The 947 will become **USS Somers,** while 948 will be christened **Morton.** The 949 and 951 will be commissioned with the names **Parsons** and **Turner Joy** respectively. DD 950 will be **Richard S. Edwards.**

The keel for the future **USS Mahan** (DLG 11) has been laid at the San Francisco Naval Shipyard. She will be the first major combatant ship built at the West Coast industrial plant and will carry the surface-to-air *Terrier* missile as will nine sister ships. *Mahan* is the third ship to bear the name of the famed naval author RADM Alfred Thayer Mahan. Both of the earlier ships were DDs.

The Navy's first guided missile destroyer **USS Gyatt** has been assigned an appropriate hull number and designator. She is now DDG 1.

Other new additions to the Fleet include the 1300-ton escort vessels **USS Evans** (DE 1023), **Hartley** (DE 1029) and **Joseph K. Taussig** (DE

1030). **Bauer** (DE 1025) is scheduled for a late fall delivery to the Navy while **Bridget** (DE 1024) is being readied for an October commissioning. **Hooper,** DE 1026, is scheduled for commissioning in December. Only four of the antisubmarine search and attack warfare, scouting, convoy escort and antiaircraft defense ships will be left under construction.

This class of ship is 314 feet long, 37 feet across the beam and draws 18 feet of water. A low silhouette will make detection by submarines difficult, but her hull will permit high speeds in rough seas. Crew strength will be 11 officers and 159 enlisted.

Evans is already serving with Pacific Fleet Escort Squadron Three.

Other destroyer force items include the completion of a three-month overhaul period by the **USS Pillsbury** (DER 133). Overhauled at the Philadelphia Naval Shipyard, *Pillsbury* was one of three ships converted for radar picket duties there.

Five seasoned radar picket ships have arrived in the Pacific after duty on the Atlantic seaward extension of the Distant Early Warning Line. The new arrivals, which will be home-ported at Pearl Harbor, are **USS Strickland** (DER 333), **Harveson** (DER 316), **Brister** (DER 327), **Fessenden** (DER 142) and **Joyce** (DER 317).

USS Wilkinson (DL 5) has been assigned Long Beach, Calif., as its home port. She will be tactical flagship of ComDesFlot Three.

Transferred from DesDiv 601 to CortRon 12 is **USS Chester T. O'Brien** (DE 421) which is equipped with eight sonar booths to facilitate group training of students at the Fleet Sonar School, Key West, Fla. CortRon 12 ships are under operational control of the school.

LAST OF THE BATTLEWAGONS—USS *Iowa* (BB 61) and USS *Wisconsin* (BB 64) are leading the pack off Cuba in August. Both are headed for mothballs.

On the WestPac departure list from San Diego was **USS Dixie** (AD 14) and the ships of DesDiv 72, **Taussig** (DD746), **Laws** (DD558), **Stembel** (DD 644) and **Hanson** (DDR 832).

Returning home after their tour with the Seventh Fleet was DesDiv 12 and CortRon Three. The destroyer unit included **USS Bausell** (DD 845), **Richard B. Anderson** (DD 786), **Agerholm** (DD 826) and **Rogers** (DDR 876). The escort units that steamed into San Diego were **USS Alvin Cockrell.** (DE 366), **LeRay Wilson** (DE 414), **Spangler** (DE (DE 696) and **George** (DE 697).

Destroyer tender **USS Bryce Canyon** (AD 36), a little weary after winning first place in small tender battle efficiency competition, spent two months in overhaul at the San Francisco Naval Shipyard.

The Navy's first guided missile submarine built from the keel up as such has been launched at the Mare Island Naval Shipyard. She is the conventionally powered **USS Grayback** (SSG 574). The preceding *Grayback*, lost while on patrol in 1944 in the East China Sea, sunk or damaged 50,000 tons of enemy shipping.

When commissioned next year, the new *Grayback* will join two other *Regulus*-carrying boats now on active duty. They are **USS Barbero** (SSG 317) and **Tunny** (SSG 282).

RANGY FLAT-TOP—Latest of the super-carriers, *USS Ranger (CVA 61) passes USS Leyte* (CVS 32) during sea trials.

SUB SEEKS SOUNDS—*USS Baya* (AGSS 318) sports removable sonar test tank used for underwater sound work.

Two other missile boats are on the way—**Growler** (SSG 577) due in mid-1959, and the nuclear powered **Halibut**, SSG(N) 587, which will be delivered in 1959. Funds for three additional nuclear powered guided missile submarines have been requested in the 1958 budget.

USS **Nautilus**, SS(N) 571, has returned to New London, Conn., after showing the Pacific Fleet her capabilities in operations off the coast of California.

USS **Jallao**, SS 368, has been termed the quietest boat in the Atlantic by a sound survey at the Submarine Base, New London.

A recent addition to the Silent Service is the recommissioned USS **Aspro** (SS 309). She rejoined the Pacific Fleet at the Mare Island Naval Shipyard. Built in 1943, she was decommissioned in late 1945, rejoined the Fleet in 1951 and was decommissioned again in 1953.

Boosting the striking power of the Pacific Fleet is Pearl Harbor-based SubDiv 91, consisting of USS **Cusk** (SS 348), **Carbonero** (SS 337) and **Tunny** (SSG 282). The three are fitted for the launching or guidance of the *Regulus* missile.

Another missile boat, *Barbero,* recently demonstrated her missile abilities to the officers and men of the Key West Submarine Force. In minutes after surfacing, her crew can roll out and launch a *Regulus* missile at targets hundreds of miles away and then disappear beneath the surface.

The 2310-ton, nuclear-driven **Skate,** SS(N) 578, has been launched at Groton, Conn. Smaller than **Nautilus** and **Seawolf,** SS(N) 575, *Skate* has one emergency diesel power plant and an improved atomic power unit. She is due to join the Fleet in 1958.

Sporting a new paint job and much new equipment, the submarine tender USS **Nereus** (AS 17) has returned to her San Diego, Calif., buoy after being overhauled at Hunter's Point.

From the auxiliary types comes word that the seaplane tender USS **Floyds Bay** (AVP 40) has returned to North Island after a tour of duty in the Far East. Upkeep and leave will keep her occupied until transferred to Naval Air Station Whidbey Island near Seattle later this year.

The San Diego based attack transport USS **Cavalier** (APA 37) completed her overhaul period at Mare Island and has embarked on a training program before getting underway for the Far East late this year. Another transport, APA 248, now under construction, has been assigned the name **Paul Revere.**

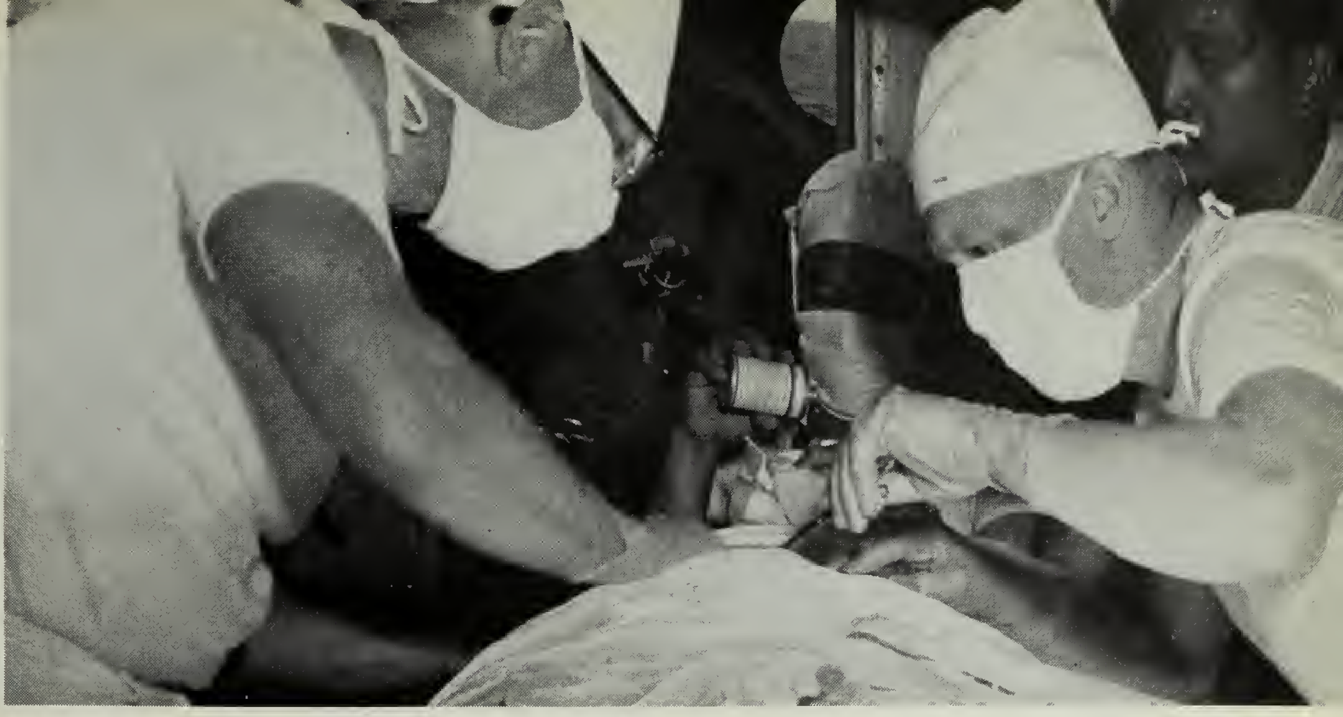
Making her first appearance in the Pacific since commissioning last March is USS **Monticello** (LSD 35). Constructed at Pascagoula, Miss., LSD 35 conducted shakedown cruises in the Atlantic and Caribbean, then made the voyage from Boston to San Diego in 20 days.

In the Atlantic, USS **Launcher** (YV 2), the only drone aircraft control ship in LantFlt, is at the Norfolk Naval Shipyard for repairs. At Portsmouth, N.H., the oiler USS **Neosho** (AO 143) was drydocked and an experimental torpedo tube installed. After test firing for the Bureau of Ordnance, the tube was removed and the ship returned to regular operations.

On the Military Assistance Program scene, six warships were loaned to the Chinese Nationalist government. Five patrol craft and an LST are in the order which will replace over-age vessels now in use. The PCs were turned over to Chinese crews at Seattle, Wash., with the LST being delivered at Long Beach.

New ships are launched and commissioned, others conduct routine operations, and some are scrapped, but all in keeping with fulfilling the Navy's mission of contributing directly to the defense of the U.S., supporting our foreign policy and maintaining control of the seas.

NEW SUB HUNTER—*USS Evans* (DE 1023) has joined the Pacific Fleet. Her new silhouette is not only sleek but helps prevent detection by submarines.



WARDROOM aboard *Rombach* was used as operating room. *Below:* Patient is transferred by highline.

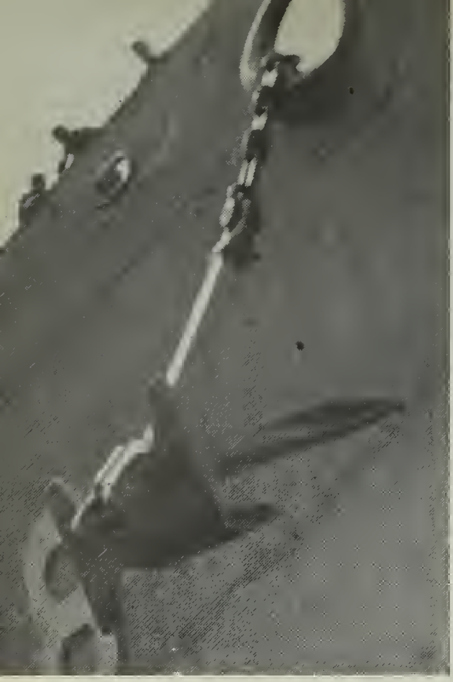
Shipboard Surgery

A HIGHLINE TRANSFER, two soup spoons and a Naval Reserve doctor on active duty for training played major roles in an emergency appendectomy at sea recently.

When James D. Maxwell, YNT2, was stricken with appendicitis on board a Reserve training ship, USS *Goss* (DE 444), there was no doctor on board. Transferred by highline to USS *Rombach* (DE 364), the yeoman was placed under the care of CAPT L. A. White, MC, USNR, serving on AcDuTra.

The doctor quickly turned the wardroom into an operating room. With the aid of the cook and a shipfitter, two soup spoons were converted into prongs needed to hold the incision open. Two corpsmen—one a *Rombach* crewman, the other a Reservist on AcDuTra—acted as assistants. The operation was a success.

RESERVE CORPSMAN (left) goes for a ride. Below: Patient and doctor look at jury-rig instruments.



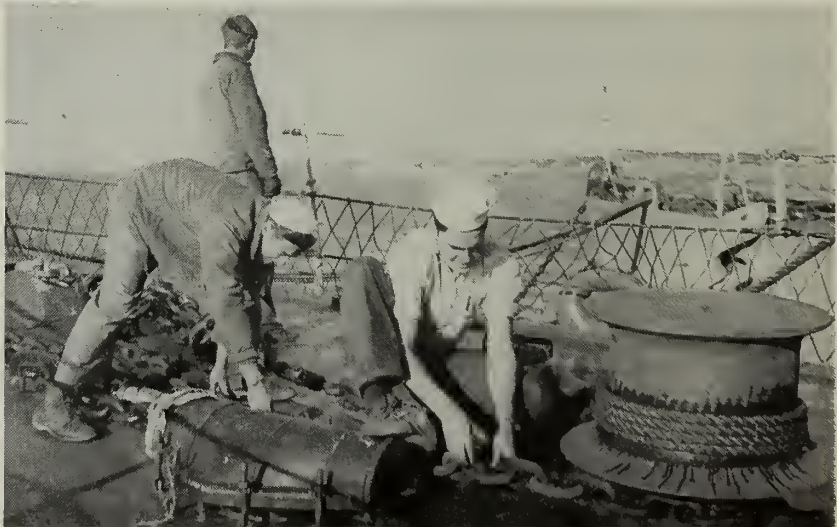
They're Bigger and Better:

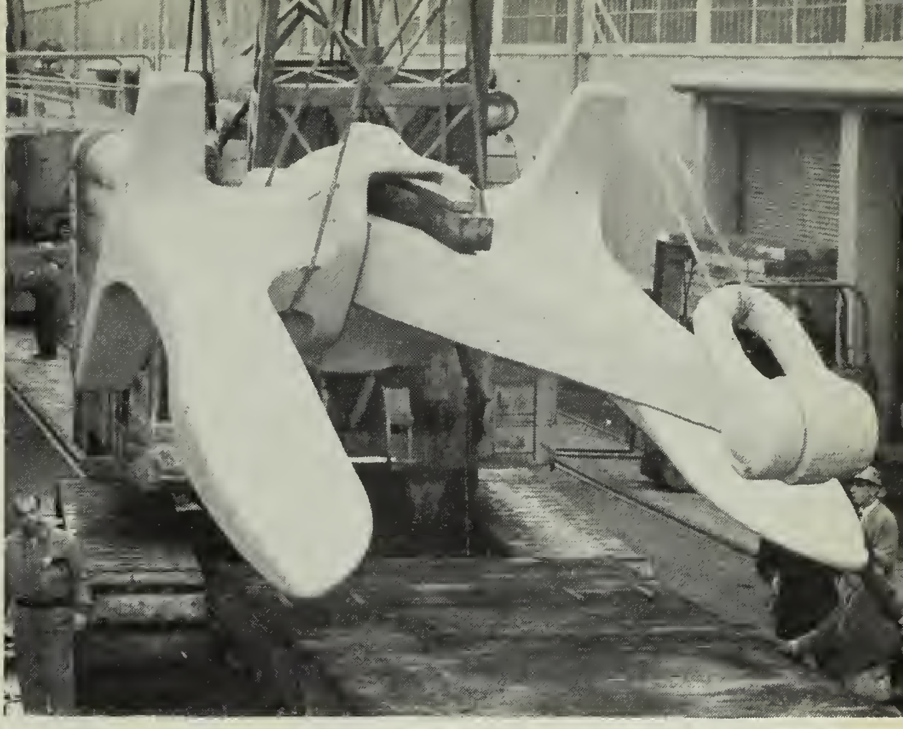
EVEN BEFORE YOUR FIRST Navy cruise, if you ever did any river or lake fishing, you realized the value of an anchor. Perhaps in those days your anchor was a rock attached to your boat with a piece of clothesline, but it did the job and kept your boat somewhere near your favorite fishing hole.

The Navy has to be a great deal more careful about the way it anchors and moors its ships, but the principle is still the same. A ship is anchored when it is held in place by a weight dropped to the bottom of the stream; it is moored when secured alongside a pier or to a mooring buoy, when it is swinging on a bight of a chain between two anchors in line, or when it is secured alongside a dock or another ship.

The collection of equipment used in connection with anchoring is called ground tackle. In many respects it is the most vital part of a ship's equipment. A ship's safety depends upon the design, construction, condition, management, and handling of this gear. The Navyman must know his ground tackle, understand its use, its limitations, and the many elements that enter into its effective operation. In fact, on board Navy ships the officer who is responsible for maintenance of this equipment keeps a complete history log of each piece.

Members of the ground tackle family have evolved out of a function necessitated by the anchor and its chain. Some of the gear which belongs to this family grabs and





Anchors Away

pulls the chain up into the ship, stops the chain, releases the chain, holds the chain secure, provides smooth runways and openings for it to pass upon and provides storage for the chain when not in use.

Lower left: Anchor is examined while ship is in drydock. *Top left:* EMs look at anchor over side of ship. *Top center:* Whitehats battle salt corrosion under flight deck of carrier. *Top right:* This 60,000-pound anchor was made for USS *Forrestal* (CVA 59). *Right center:* A chain made of 360-pound links supports *Forrestal's* giant anchor. *Lower right:* Fathoms of anchor chain await paint job. *Left center:* Destroyermen work with anchor chain after mooring ship to buoy.

—Delbert Cass, SN, USN.

LETTERS TO THE EDITOR

This section is open to unofficial communications from within the naval service on matters of general interest. However, it is not intended to conflict in any way with Navy Regulations regarding the forwarding of official mail through channels, nor is it to substitute for the policy of obtaining information from local commands in all possible instances. Do not send postage or return envelopes. Sign full name and address. Address letter to Editor, ALL HANDS, Room 1809, Bureau of Naval Personnel, Navy Dept., Washington, 25, D. C.

Submarine Nuclear Training

SIR: BuPers Inst. 1306.53A limits applications for submarine nuclear training to MMs, ENs, ETs, EMs, ICs and HMs (E-6 and E-7) who are qualified in submarines. Obviously, these aren't the only ratings needed in the crews of atomic submarines, so what about the others?

Could a submarine-qualified sonarman, for instance, be assigned to duty in a nuclear submarine without completing the Nuclear Power Training Program? Is there any way he could possibly get in on the nuclear training program even if he didn't have to complete it in order to get atomic sub duty? And, how would he apply for either the training program or duty in a nuclear sub?—J. C. S., SOC (SS) and O. R. P., SO1 (SS), USN.

- *Yes, he could be assigned to nuclear-sub duty without completing the training program. And he might possibly get in on the training program if there weren't enough MMs, ENs, ETs, EMs, ICs and HMs available for it. However, there are plenty of men available in these ratings at present.*

Except for the ratings listed in the instruction, applications for either nuclear submarine duty or nuclear power training are not being accepted now, since so few men in other ratings are needed. When they are, a call will go out for nominations by Submarine Force Commanders.

So, your best bet is to sit tight until the call goes out for men in your rating. Then, let your CO know that you'd like to be nominated.—ED.

Awards for Eldorado

SIR: I would like to know what awards USS Eldorado (AGC 11) earned between 6 Nov 1950 and 19 Oct 1953. I was a member of her crew during that period and have run into a disagreement with several other former crew members over this subject.—R. J. B., RM1, USN.

- Eldorado *picked up quite a few awards for her Korean service. During the period you were on board she won the Korean Presidential Unit Citation, the Korean Service Medal and the United Nations Service Medal, plus, of course, the National Defense Service Medal.*

Before the Korean fighting she did pretty well too. Commissioned 25 Aug 1944, she earned the first battle star on her Asiatic-Pacific Service Medal in February 1945 at Iwo Jima. There, she served as flagship of Commander Amphibious Forces, U. S. Pacific Fleet. The then Secretary of the Navy, James V. Forrestal, observed the Iwo landings from her decks and news correspondents used her radio facilities to broadcast word of the battle direct from the beachhead to the people back home.

She won a second battle star at Okinawa, where she remained in the vicinity of Hagushi Beach for 47 days. During that time there were 560 enemy air attacks on shipping in that area, and since both the Commander Air Support Control Unit and the Force Fighter Director Officer were embarked, Eldorado's *CIC was the central unit in the air defense against these raids. Of the 2228 enemy planes that made the attacks, 1438 were destroyed—either by gunfire, combat air patrols or their own suicide tactics.*

Between World War II and the Korean conflict, Eldorado *went on to add the Navy Occupation and China Service Medals to her collection.*

We know you didn't ask for all that information, but we figure a ship like yours deserves a plug once in awhile.—ED.

Ship Reunions

News of reunions of ships and organizations will be carried in this column from time to time. In planning a reunion, best results will be obtained by notifying the Editor, ALL HANDS Magazine, Room 1809, Bureau of Naval Personnel, Navy Department, Washington 25, D. C., four months in advance.

- USS *Gleaves* (DD 423)—The fifth reunion of all former crew members will be held on 26 October at the Park Sheraton Hotel, New York, N. Y. For further information, write to Frank J. Calzaretta, 12 Sanford Pl., Jersey City, N. J.
- USS *Abercrombie* (DE 343)—All former crew members who served on board from May 1944 until May 1946 and who are interested in a reunion with the time and place to be decided by mutual consent, may write to Ray Shiel, 171 Arnold Ave., Granston, R. I.
- USS *Bush* (DD 529)—All survivors interested in holding a reunion in 1958, write Vic Dunn, 726 W. Findlay St., Carey, Ohio, or Virgil Hayes, RR No. 1, Kenton, Ohio.
- USS *Willis A. Lee* (DL 4)—All former shipmates who would like to hold a reunion with the time and place to be decided by mutual consent may write to Henry M. Pophin, TE (RM)1, Staff CNATRA, NAS, Pensacola, Fla.

Mines and Minemen

SIR: A friend of mine claims that the mineman rating did not exist before 1947 or 1948. Earlier, he says, minemen were specialists in other ratings such as gunner's mate or torpedoman's mate.

I disagree with him because I distinctly remember the mineman rating badge being approved in either late 1945 or early 1946. Also, I remember men aboard USS Shea (DM 30) receiving mail addressed to them as MN3c.

We would appreciate your assistance in this light disagreement.—R. C. C., San Diego, Calif.

- *You are closest to being right. The mineman rating was established in 1943. This rating is a mere youngster when compared with the gunner's mate rating, established in 1797 with pay grades being added in 1893, or the torpedoman rating set up in 1921 and changed to torpedoman's mate in 1942.*

You might point out to your friend that mine warfare in the U.S. goes back to 1777 when a triggered powder keg was set adrift in the Delaware River. Its target, the blockading British Squadron, was saved from possible danger by an unfortunate (for the Rebels) current.

Robert Fulton invented a torpedo-mine. After it was rejected by the French he took the undersea weapon to England, and in 1804 destroyed an enemy vessel during the invasion of Boulogne. When the mine came into general use in this country during the Civil War it was already an established weapon in Europe.

We might note here that when Admiral David Farragut shouted the immortal "Damn the torpedoes! Full speed ahead!" he was referring to mines laid in Mobile Bay by the Confederate forces.

Mine warfare assumed great importance in World War I when American and British forces planted 70,000 mines in the North Sea. During World War II and the Korean conflict mines were used by both opposing forces.—ED.

Navyman Renders Passing Honors to a Great Ship

Sir: As one of my collateral duties, while attached to the Naval Base at Pearl Harbor during 1950-52, I was in charge of the care of the USS *Arizona* (BB 39) Memorial. I used to go out to her for inspection purposes at least one morning each week. I never failed to feel humbled when I boarded her.

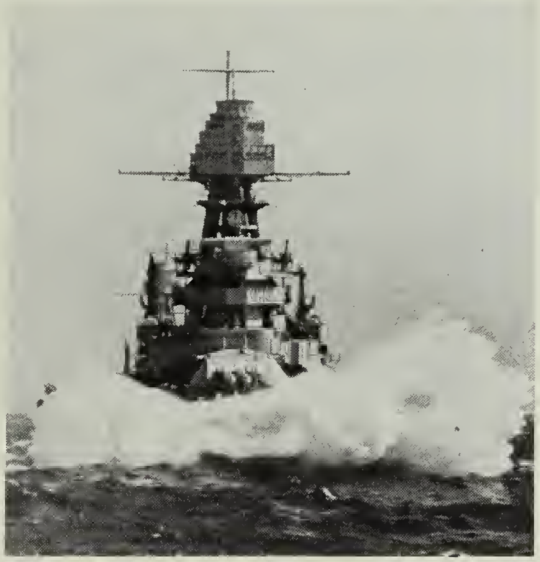
Arizona is a tomb, containing hundreds of our Navymen who gave their lives on that Sunday, 7 Dec 1941, when Pearl Harbor was attacked. It was decided to leave the men in her, as a final resting place and a perpetual memorial to their sacrifice for their country.

Arizona is still carried on the Navy rolls as a ship of the Navy. A fund is set aside, at the Pearl Harbor Naval Shipyard, for the maintenance of the platform, flagstaff and exposed portion of her hull.

Hundreds of visitors board her each year by means of a Navy boat which makes daily trips for this purpose. A small detail of Navymen is charged with raising the colors on her each morning and lowering them at sunset. In addition, they police the platform and keep a high polish on the commemoration plaques honoring the men entombed in her.

Whenever I saw this once grand ship I would feel a twinge of sadness mixed with pride because, even in her present condition, with her colors flying high, she still had a proud bearing about her. She stands as a symbol of the Navy's defiance in one of its darkest hours.

Maybe my emotions at that time were because of the memory of my shipmates I knew who rested there. However, I would rather think it was the significance of what she represented.



USS ARIZONA (BB 39) plows through high seas

While standing on the platform, I would see other U. S. ships pass from time to time. Except for idle curiosity, it appeared that this once great ship would be almost ignored—*yet passing honors would be exchanged with other ships.* I couldn't help but think to myself—Isn't this ship manned just as surely as those who pass, even though her crew is not seen? Should she be ignored, because of her rusty, battered hulk and because there was no visible person to return the honors? Doesn't she mean anything but a landmark of Pearl Harbor to the Fleet passing by?

We are fond of tradition in our Navy and take pride in carrying out the traditions we have. But each must be started by someone.

Couldn't our Navy start a tradition of rendering passing honors to *Arizona?* Surely she is a Navy ship with a Navy crew, as much as those who pass by. She is certainly symbolic of all ships and shipmates lost in the war she represents.

This salute to our Navy dead would not only serve as a mark of respect for a gallant ship and crew, but would also serve as a reminder to our younger sailors in the saluting ships that the greatest of all gifts to our country—life itself—is not forgotten.

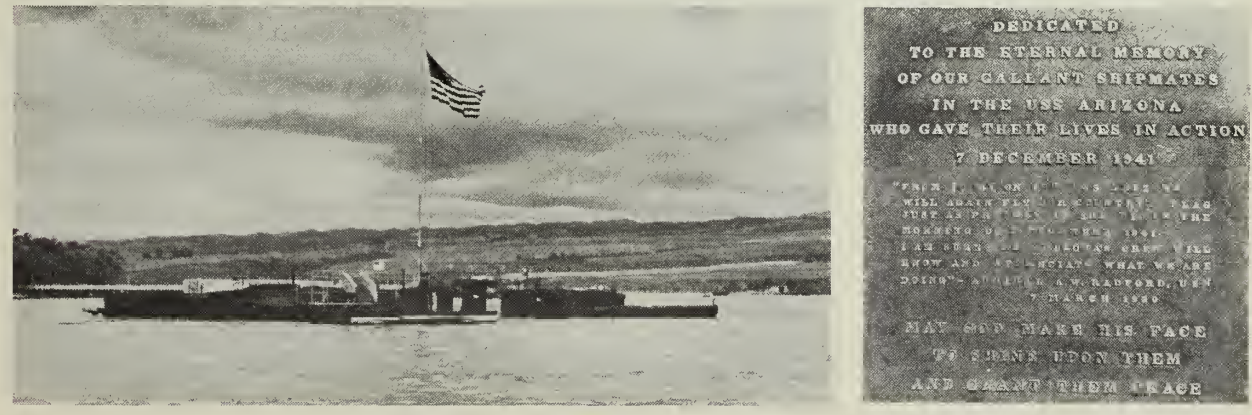
And make no mistake. The honors will be returned. You may not see it, but you will know it. — F. E. Bailey, CHBOSN, USN.

• *Speaking only unofficially of course, we think your suggestion (which was most moving in its presentation) is one of the finest we've heard in a long time.*

Unlike many of our Navy traditions, whose origins have often been obscured by time, this tribute's origin would remain alive.

Personally, we'd like to see such a tradition come about but it seems to us that, as a rule, "tradition" is not the result of official authoritative action but rather, a natural growth from a number of spontaneous actions which eventually do receive official recognition.

However, that's only our opinion. We have taken it upon ourselves to pass your letter to better informed and more authoritative sources to see what they have to say on the subject. We'll let you know.—Ed.



DEDICATED
TO THE ETERNAL MEMORY
OF OUR GALLANT SHIPMATES
IN THE USS ARIZONA
WHO GAVE THEIR LIVES IN ACTION
7 DECEMBER 1941

MAY GOD MAKE HIS FACE
TO SHINE UPON THEM
AND GRANT THEM PEACE

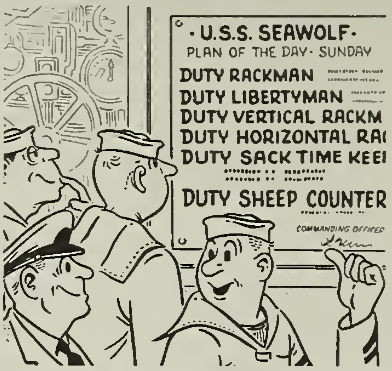
FLAG FLIES above *USS Arizona* (BB 39) and her crew as a memorial to the sacrifice they made at Pearl Harbor

Ratings of RK, ChH and LM Are Older Than You Think

SIR: The item on page 57 of your August issue, by JO3 Vernon, leads an old timer to wonder, once again, why these youngsters always think they have dreamed up something new.

You might like to know that the specialty rating of Rackman was established on board USS *Seawolf* (SS 197) when *Seawolf* had just joined the Asiatic Fleet in the capacity of the newest (and, of course, the best) submarine in the U. S. Fleet. The rate came into existence when the commanding officer then LCDR (now RADM) Frederick B. Warder, USN, decided to abolish reveille on Sunday in order to let the *Seawolves* have enough rack time to recover from a hard week's work and a Saturday night ashore in Manila.

There was a minority who preferred to strike for Chow Hounds (ChH) but these were generally limited to the off-going and oncoming watches. The ship's cook generously loaned them the free use of his galley (and with no small-minded squabbles about cleaning up afterwards) to prepare their breakfasts while he, with the rest of the crew, assiduously pursued the assignments required for advancement in rating for Rackman.



Some of those who finished the full course, including practical factors, included that sterling innovator Fearless Fred himself. J. O. Souza (already a qualified RKC and Chief of the Boat) hoped to be promoted to Warrant Rackman and thus become Sacktime Supervisor on a bigtime submarine tender; John Sullivan, then YN1 (now CDR) could sleep equally well horizontally or propped up behind the typewriter in the ship's office; and Jim Mercer, then ensign, (now CDR) had majored in inactivity at the Submarine School and had reported on board already fully qualified to act as Sacktime instructor.

I would also suggest that you have one of your younger writers do a little research on the rating of Libertyman (LM) which, I believe, also originated on board *Seawolf*. She was quite a ship. I know. I was there.—J. A. Adkins, (then LT), CAPT, USN.

- *The way you tell it,* Seawolf *sounds like good duty. However, we suspect during the week you earned your extra Sunday sack time.*

We've learned through bitter experience never to lay claim to any "first." And we would never, no never, be rash enough to attribute to any period the first Rackman. Chances are pretty good that Rackmen, Chowhounds and Libertymen could be found on board Santa Maria, Pinta *and* Nina *and we wouldn't be surprised if, when galleys were in their prime, some way couldn't be found to take ten under the benches.*—ED.

HMs with Fleet Marine Force

SIR: Why are Hospital Corpsmen and Dental Technicians serving with the Fleet Marine Force required to wear the Marine Corps uniform? Was a poll taken or is someone trying to make Marines out of the Corpsmen?

I have discussed this issue with most of the Corpsmen attached to the First Marine Brigade and "We want our Navy uniforms back."

However, since we are required to wear the Marine Corps uniform it is only fitting and proper that we have the appropriate rate insignia to go with it. They have been on order since July 1956, but as yet we have not even seen a downy plume from the eagle.—R. F., HM3, USN.

- *This a question that has been discussed many times in these pages and in the various bureaus of the Navy Department. The result of a poll, undertaken at the request of the Permanent Naval Uniform Board, may answer many of your questions. Some 946 Hospital Corpsmen were asked which uniform they preferred.*

The results were decisive: 614 (65 per cent) favored the Marine green; 330 (35 per cent) were opposed; and two expressed no preference. Of the men polled 901 were on duty with the Fleet Marine Force.

Proper insignia are at present available from Marine Corps Supply activities. Why not see your clothing supply officer? The difficulty may be a requisitioning problem.—ED.

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Government Printing Office
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Warrant Officer Exams

SIR: The May 1957 issue of ALL HANDS contains information regarding the Warrant Officer Program and mentions the A to N type as part of the examination. Since it is my intention to take the examination and the I&E officer on board is unable to locate any information about this part of the examination, I would appreciate your help on this subject.—D. L. P., BMI, USN.

• *There is going to be a change to BuPers Inst. 1120.18D which will be issued in the near future changing the "A to N type" examination to "General Military Knowledge" examination.*—ED.

Hospital Corpsman School

SIR: When I was in boot camp I requested that I be sent to the Class A Hospital Corpsman School. The request was not granted and I was sent on to the Fleet. Now I am a Commissaryman, third, but I'd still like to become a Corpsman.

Is it posisble for me to have my rate changed to Corpsman, third, or would I have to revert to seaman in order to make the switch?

My GCT is 47 and my arithmetic score is 45. I understand that the two combined should total 100 for corpsmen. However, according to BuPers Inst. 1306.55A this factor could be waived.

I am very anxious to make this change because of the strong interest I have in the Corpsman rating. I would certainly put forth every effort to do a good job at it.—R. D. L., CS3, USN.

• *You would not have to revert to seaman in order to get into the Class A school for Corpsmen. If you submit a request for the school (through channels, of course) a waiver of rating will be considered.*

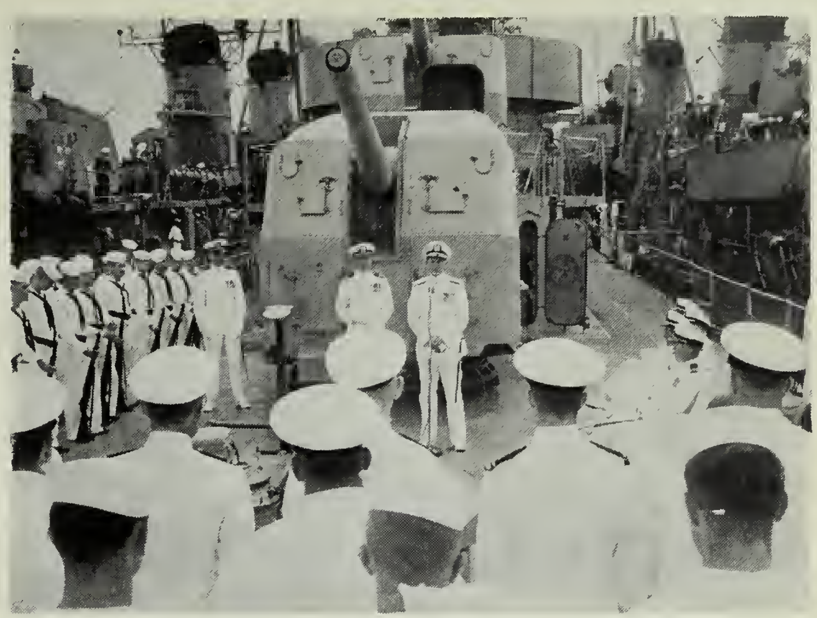
This means that if the request is granted, you'd be able to attend the school while retaining your present rate of CS3. Then, when you successfully completed your training your rate would be changed to HM3. Should you fail, you'd still have your CS3 rate to fall back on.

As for your test scores, they would be waived when—and if—the waiver of rating is granted.—ED.

Transfer from Other Services

SIR: After my present tour of two years in the Army, I plan to enlist in the Navy. Could you answer the following for me: (1) Would I lose my present grade? (2) How about boot camp? (3) How soon before I go on active duty? (4) Would I be retained in my present specialty of supply? (5) Would I have to take any tests?—L.F.G., Pvt., USA.

• *Here are the answers, "by the numbers." (1) If you enlist in the Regular Navy after discharge from another branch of the armed forces in pay grade E-4 or below, you may be enlisted in a pay grade no higher than E-3 as an SN, FN, AN or TN. Those who are in grades E-5, E-6 or E-7 in another service may be enlisted in the Regular Navy in pay grade E-4. But they must do this within 12 months of the anniversary date of last discharge. (2) If you have advanced to pay grade E-4 or above by the time your Army enlistment is up, there will be no boot camp. (3) You would be placed on immediate active duty after processing for enlistment. (4) Since the Navy feels that you have already picked up experience in another branch of the service, chances are you would be placed in the same general service rating as your specialty. (5) You would be given the Armed Forces Qualification Test and, since you've had previous service other than Navy, would have to make a score of at least the 31st percentile.*—ED.



Ross Earns 'E's for Battle Efficiency, Operations

SIR: Here are some pictures we are sending at the end of our most successful year. The first is a picture of one of our favorite pinups and the other is a picture of the presentation of the battle efficiency plaque for 1957 by Admiral Claude V. Ricketts, Commander Destroyer Flotilla Four to *Ross* (DD 563). Our CO, Commander Edmond J. Newbould, is accepting the award on behalf of the crew. Besides winning the Battle Efficiency "E" we won the Operations "E," being the only Atlantic Fleet Destroyer to win both. We also have two Gunnery Departmental "E"s won in Fiscal 1957.

Now we are on our way to Guantanamo Bay for refresher training and then to the Med.—J.R.A., LCDR, USN.

• *Thanks for the photos. Good luck and continued success on your next cruise.*—ED.

★ ★ ★ ★ TODAY'S NAVY ★ ★ ★ ★

SEARCH ME—Members of the deck gang of *USS Shangri La* (CVA 38) man signal searchlight while the attack carrier makes passage through Pacific.

High Up with Aerobee-Hi

Aerobee-Hi, the rocket which usually carries satellite instruments aloft, has already zoomed 190 miles above the earth, breaking the old altitude record of 164 miles for single-stage booster rockets. During its test, *Aerobee-Hi* reached a speed of slightly more than 4900 mph.

One *Aerobee-Hi* was launched at Fort Churchill, Manitoba, Canada, in July by scientists from the Naval Research Laboratory. Sixteen other firings will be spaced throughout the 18 months of the International Geophysical Year. The research rocket that was fired carried a payload of 145 pounds of scientific instruments in its nose to obtain new data on the ionosphere, that part of the earth's atmosphere which begins at an altitude of about 50 miles and affects radio communication.

A timer opens 14-foot antennas on the rocket and also turns on a radio transmitter in the nose section within approximately a minute after take-off. During firings, two signals are sent out from the transmitter. One is not changed by its passage through the ionosphere; the second is considerably affected by the conditions its encounters.

Comparison of the two signals allows the scientists to gather new information on such matters as electron density, ion density, the intensity of the earth's magnetic field and the frequency of electron collisions. All of this is expected to be of practical value in improving long-range radio communications.

YESTERDAY'S NAVY

On 6 Oct 1884 the U. S. Naval War College was established at Newport, R. I. On 13 Oct 1775 the first official step toward the establishment of the U. S. Navy was taken. Silas Deane, Christopher Gadsden and John Langdon were appointed a committee by Congress to fit out two warships to cruise against the British. On 27 Oct 1864 LT Cushing rammed and destroyed the Confederate ship *Albemarle*. From 24 to 26 Oct 1944 one of the biggest naval actions ever fought occurred in the Battle for Leyte Gulf, where the U. S. Navy destroyed Japanese naval power.

Hanna Gets Around

They call her *"Hurrying Hanna"* and hurry she did. USS *Hanna* (DE 449) claims to have established a new CruDesPac, if not Fleetwide, record for the number of places visited during one five and one-half months' cruise. From the time she left San Diego until her return, she steamed almost 28,000 miles and visited 50 islands and ports, 61 if you want to count those visited more than once.

Hanna's itinerary looks like a page from a Western Pacific atlas. Highlights of the trip were stops at Hawaii, Australia, Korea, Japan and the Philippines.

During her cruise, *Hanna* took part in "Operation Broadside," a combined U.S.-Philippine exercise, and conducted in-port and underway training with Korean naval personnel. In addition, while she was in Yokoate Shima, in the Ryukyu Islands, *Hanna* helped a merchantman in distress.

Just for the record, here's a list of the places she visited:

Pearl Harbor, Territory of Hawaii; Pago Pago, American Samoa; Brisbane, Australia; Manus, Admiralty Islands; Guam, Mariana Islands; Gaferut, Faraulep, Eauripik, Woleai, Ifalik, Olimarao, Elato, Lamotrek, Satawal, West Fayu, Pikelot, Pulusuk, Puluwat, Pulap, Ulul, Pisaras and Magur Islands in the Central Carolines groups.

Also: Agiguan, Anatahan, Agrihan, Asuncion, Maug, Farallon de Pajaros, Pagan, Alamagan, Guguan and Sariguan islands in the Northern Marianas; Kita Iwo Jima, Haha Jima, Chichi Jima, Muko Jima, Nishino Jima, Iwo Jima and Minami Iwo Jima in the Volcano and Bonin Island groups.

Also: Yokosuka and Sasebo, Japan; Chinhae, Korea; Yokoate Shima and Okinawa in the Ryukyu Islands; Hong Kong, British Crown Colony; Manila, Subic Bay and Sangley Point in the Philippines; and Midway Island.

Bet you didn't know the Pacific was so crowded—or that there were so many places to visit.

Dining Deluxe in *De Haven*

"On the light blue rolling waters of the western Pacific, at dusk, with warm evening breezes blowing gently over the fantail, the crew of the destroyer USS *De Haven* (DD 727) celebrated its second month in the Far East." That's what the news release said.

In true luxury-liner fashion, *De Haven's* men had a buffet dinner, the release added. Enticing smells came from delicious charcoal-broiled steaks being grilled in the shadows of mount 53 while the chief cook busily sliced iced watermelon.

The menu of steaks, potato salad, freshly sliced tomatoes, fresh corn and watermelon amply provided for all hearty appetites. After a satisfying repast the crew returned to various duties with the feeling that this should happen more often. And there are indications that it will.

Arrangements for the affair were made by the ship's executive officer, LCDR Robert Kirk, USN. Coincidentally, he has collateral duty as *De Haven's* reenlistment officer.

Prototype of Earth Satellite

The Navy's efforts to place a 20-inch artificial satellite in an orbit around the earth, moved closer to the giant leap into space with the delivery of a prototype of the first-stage launching vehicle to the Air Force Missile Test Center, Cape Canaveral, Fla.

For eight weeks the rocket was studied during static trials. Its newly developed 27,000-pound-thrust, first-stage engine is to be test flown at the end of the ground trials.

When the first flight tests are made, dummy second and third stages will be used. They will be filled with enough instruments and ballast to achieve realistic performance. The second stage of the three-stage rocket will contain a prototype of the guidance system of the launching vehicle when the space attempt is made some time during the International Geophysical Year (IGY) which ends 31 Dec 1958.

The first stage will provide the initial force necessary to push the satellite to an altitude of 30 to 40 miles where it will drop off. The second stage will then fire and the rocket will continue climbing to about 140 miles and a speed of 11,000 mph.

Coasting upward to 300 miles, the third stage will fire, boosting the satellite to its orbital velocity of 18,000 mph.

After the small shiny metal ball packed full of instruments falls away from the launching vehicle, it will circle the earth about once every 90 minutes. Its altitude will vary from 200-300 miles to 800-1500 miles because of the elliptic-shaped orbit.

All previous flight tests conducted over the ocean rocket range at the Missile Test Center, were made with *Viking* rockets simulating the first of the rocket's three stages. With the arrival of the prototype *Vanguard* rocket, Naval Research Laboratory personnel were able to study for the first time the actual equipment that will be used in the attempt.

The technical responsibility for placing a scientific earth satellite in space was given to the Navy under the U. S. IGY program.

Wooden Ship for Nuclear Navy

When USS *Bittern* (MHC 43) was commissioned 26 Aug 1957 in New York, it showed that the era of "wooden ships and iron men" is not entirely a thing of the past in spite of the advances in nuclear-powered vessels.

The 360-ton all-wooden hull *Bittern* is the first of her class to be designed and built as a coastal minehunter.

She is constructed of wood to reduce magnetism—a vital necessity in performing her mission of hunting mines.

In places where wood could not be used, bronze, aluminum, and stainless steel were substituted.

The 138-foot long minehunter was named for USS *Bittern* (AM 36) which was lost by Japanese horizontal bombing at Cavite, P. I., in December 1941.

Samoan Servicemen Return Home on South Seas Visit

The Navy recently played host to more than 100 native Samoans serving throughout the Pacific as members of the U.S. armed forces, when it provided them with free transportation home.

It all came about when USS *Sussex* (AK 213), based at Pearl Harbor, was scheduled for a cruise in the South Seas. The word got around that many U.S. servicemen who live in Samoa were unable to visit their homes on leave because of the time, distance and money involved in making the trip. So, a message was sent out to the effect that *Sussex* would furnish transportation to Samoa for men who lived there and had the necessary leave due them. The crew then got busy preparing additional berthing, washing and lighting facilities for their expected guests.

On sailing day, *Sussex* had embarked Samoans representing all the services and stationed either in ships or with units on Kwajalein, Midway, Hawaii and Guam. From Samoa, *Sussex* continued to Tahiti and on her return trip picked up the leave-takers and brought them back to Pearl.

'HAPPY TRIP' is wish given Fatu Suesue, HM1, USN, by Oahu chief. *Right:* Niniva Tupua, BM2, USN, says goodby as he leaves to visit relatives.

FORMER EMs J. W. Carroll and E. H. Cahill take oath on becoming officers.

Same Face, Same Name — But There's a Difference

Edward H. Cahill, FTC, USN, and Joseph W. Carroll, GF 1, USN, have disappeared from the decks of USS *Saratoga* (CVA 60).

Conrad Weiser, MMC, USN, is no longer on board USS *Meredith* (DD 890). And John W. Branin, MMC, USN, no longer is at Great Lakes, Ill.

In their places are ENS Cahill, ENS Carroll, ENS Weiser and ENS Branin. They won their commissions after successfully completing the battery of rigid Limited Duty Officer examinations, making them eligible to join the Navy's commissioned ranks.

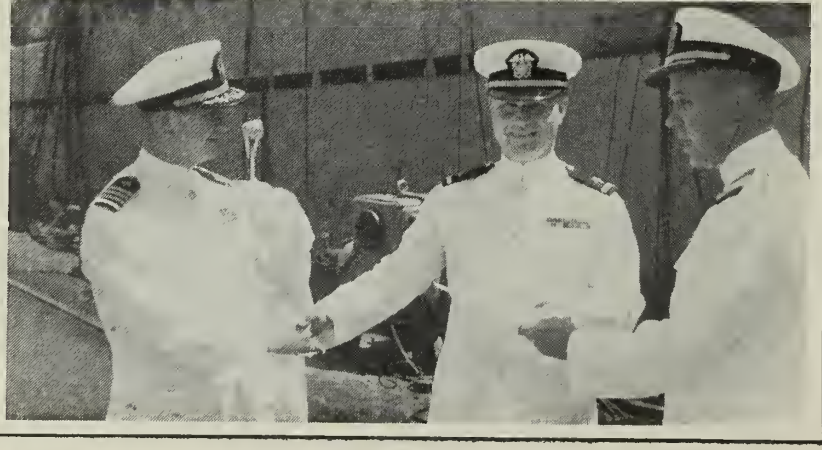
The four new ensigns are characteristic of the 631 enlisted men who were selected for commissions in the 1957 LDO program. About one-third of the first class and chief petty officers nominated for the program were selected.

This is the first year that appointments under the program have been for temporary service.

The Limited Duty Officer tests are given annually to eligible warrant officers, chief and first class petty officers. Eligibility requirements state that you must have at least 10 years of naval service and be under 35 years of age.

After each candidate's record and application is reviewed by a Selection Board convened in the Bureau of Naval Personnel, those selected are appointed ensign for temporary service in the category for which selected.

BRAND-NEW LDOs — Among officers to join the Fleet under the LDO programs are Ensigns J. W. Branin, USN, (above) and Conrad Weiser, USN.



Hornets in the Hobby Shop

Ever since USS *Hornet* (CVA 12) has made the Far East her home, the ship's Hobby Shop has been one of the most popular spaces of the ship. Built to accommodate 28 men, the Hobby Shop well-nigh bursts with nightly crowds of up to 60, and *Hornetmen* who cannot find room inside the Hobby Shop can be found working from the tops of peacoat lockers to the No. 4 Fireroom.

The reason? *Hornet* claims to have the most complete hobby facilities in the Fleet. In addition to the usual offering of leathercraft kits, models, and painting kits, the Shop also boasts of a jigsaw which was donated by members of the Navy League who made a guest cruise on the ship last year.

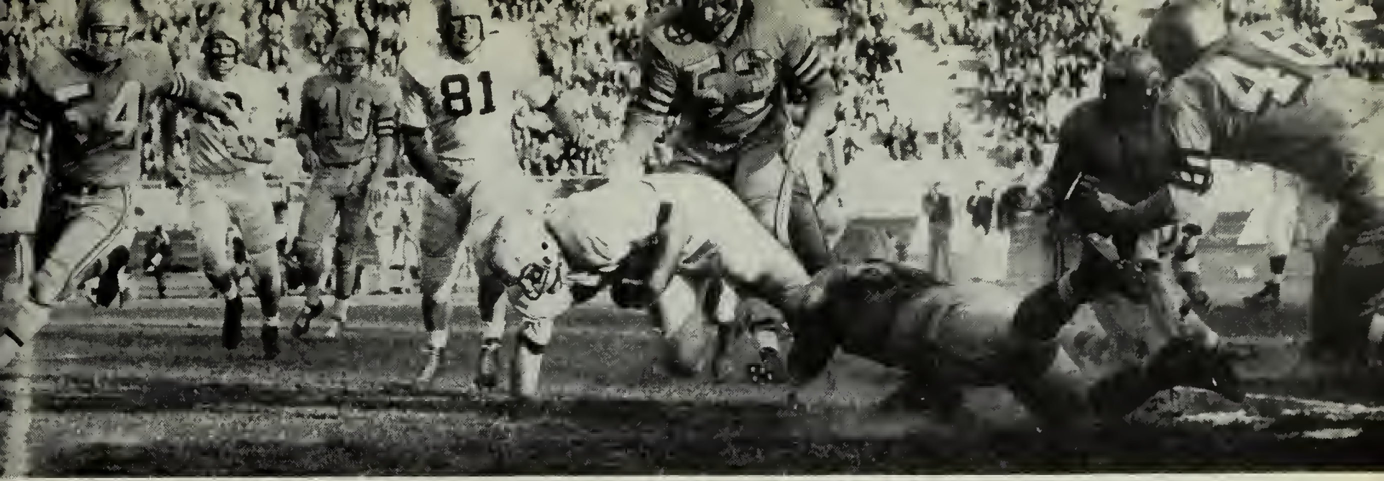
Hornet also claims to possess the *only* ceramics kiln afloat. The ship receives the already molded figures, known as "green ware"; the men then smooth them off, apply the ceramic paint, and then fire the ware in the ship's kiln. The kiln, purchased with Special Services funds, is fired three times a week or more often if necessary.

The jigsaw and kiln, together with $4000 worth of other shop facilities, supply nearly every need of the do-it-yourself sailor.

Even during holiday routine, "air operations" continue aboard *Hornet*, for amateur pilots file up to the Flight Deck to launch their model aircraft. Other *Hornetmen* are building their "dream homes" in the form of scale model houses which they themselves design and then build, using the supplies and facilities of the Hobby Shop.

Since the early part of the year, *Hornetmen* have spent more than 25,000 hours working on their favorite projects, and these same men spend up to $790 an evening just to purchase the basic materials for their hobbies. *Hornetmen* exhausted a six months' supply of airplane glue in less than three months and now airplane glue is more popular than a five-dollar bill before payday.

Despite the large number of officers and enlisted men who've been bitten by the "do-it-yourself" bug and who are taking advantage of the ship's facilities, hobby shop personnel have done a top job in keeping supplies on hand to meet the constant demands.



BENEFIT ATHLETIC contests throughout the Fleet will help keep Memorial Stadium drive moving down field.

Little Army-Navy Game Sparks Drive Throughout Nation for Memorial Stadium

Individual and group efforts by Navymen and Marines to enlist the support of private citizens have done much to help put the fund-raising drive to build the Navy-Marine Corps Memorial Stadium in Annapolis, Md., over the $700,000 mark.

The latest activity to blossom forth is Key West, Fla. Here over $6000 has been raised already. Fund raisers have interested the local citizens in their drive and they expect to finish in a blaze of glory in October with a grand "Hoedown" which, they hope, will attract everyone south of Miami.

Other activities are planning fall and winter carnivals, shipwreck parties, minstrel shows and benefit athletic contests. The majority of the large veterans organizations have passed resolutions at their national conventions endorsing the project and recommending that their posts contribute $100 each for a memorial chair.

The stadium committee has enlisted the voluntary help of a large number of civilians on an unpaid basis. Professional fund-raisers are not being used and thus ninety-nine cents of every dollar will go into construction.

Two new souvenir items have been made available. One is a sword letter-opener which will be mailed to anyone who contributes $5.00 or more and requests the opener.

The other is a recording of a new arrangement of *Anchors Aweigh* and the *Marine Corps Hymn,* which will be mailed to anyone requesting it and who contributes $1.00 or more.

All proceeds from the inaugural "Little Army-Navy" football game on 26 October, at Annapolis, will go into the Memorial Fund. A Navy band from Washington and an Army band from Fort Meade will play for the rooters. Half-time entertainment is being provided by the Sunset Paraders, the Marine Corps Drum and Bugle Corps and crack drill team; and the exhibition Army Pipe and Drum Corps known as the "Kilties." High government and foreign dignitaries will attend. Tickets are general admission at $2.00.

Of the $700,000 referred to above, a total of $227,875 has been contributed from the services. The drive will continue until the total amount of $2,100,000 is reached.

Military contributions have been broken down as follows:

Atlantic Fleet	$71,291
Pacific Fleet	60,587
Misc. Sea and Foreign	8 767
First Naval District	5,413
Third Naval District	9,349
Fourth Naval District	4,743
Fifth Naval District	10,307
Sixth Naval District	9,863
Eighth Naval District	1,635
Ninth Naval District	9,200
Tenth Naval District	9,107
Eleventh Naval District	2,848
Twelfth Naval District	5,550
Thirteenth Naval District	811
Fourteenth Naval District	1,244
Fifteenth Naval District	88
Seventeenth Naval District	100
Severn River Naval Command	11,034
Potomac River Naval Command	5,938

80 Miles Up

Navy *Dan* rockets, combinations of a *Deacon* rocket and a *Nike* booster power unit, are standing by at the Naval Air Missile Test Center, Point Mugu, Calif., ready to roar off on a minute's notice to gather information on solar flares.

The study of the flares—tremendous outburst of energy radiating from the sun—is a part of the International Geophysical Year (IGY) activities of the United States.

The *Dan* rockets will climb to a peak altitude of 80 miles to gather and transmit telemetered data on ultraviolet and X-rays caused by the flares. On 1 Jul 1957 an IGY rocket roared up to an altitude of 70 miles to obtain information on normal solar radiations to be used as a background against which flare effects can be compared.

Scientists hope to learn why the flares cause disturbances which disrupt communications in the ionosphere (a blanket of electrified atmosphere some 50 miles above the surface of the earth). Disturbances can cause blackouts of shortwave and broadcast transmissions.

Because flares reach their peak in a matter of minutes, the *Dan* rockets are kept standing by in their launchers.

Scientists at three U.S. observatories are carrying on a continuous visual flare watch and when one occurs, they notify the missile unit by radio or teletype. In addition, at the launch site on San Nicholas Island, radio signals of six distant short-wave stations are being monitored. As they fade out the receivers automatically alert the rocket station.

Fourteen firings are scheduled in the solar flare study program.

Winners in Golf, Tennis and Baseball

The new All-Navy and Inter-Service Senior Golf Champion is a veteran Navyman who is a former football player and coach.

He's Chief Warrant Officer Walter Axcell, USN, of NAS Barbers Point, Oahu, T. H. After winning the All-Navy Senior Division at Memphis, he went on to the Marine Corps Recruit Depot at Parris Island, S. C., where he repeated his winning performance (21-24 Aug) and emerged as the Navy's only winner in the Inter-Service Golf Championship.

Mr. Axcell, who also won the 1948 All-Navy Championship at Parris Island, won this year's title with rounds of 76-76-74-79 for a 305 total in the 72-hole medal play event —11 strokes ahead of the runner-up in the Senior Division.

Winner of the 1957 All-Navy Men's Open Crown was LCDR James Kinder, USN, a veteran golfer from NAS Pensacola. He fired a one under par 287 to capture the title, while Estelle St. Clair, PN2, USN (W), NTC Bainbridge, won the All-Navy Women's Division with 357.

TEED OFF — LCDR J. W. Kinder, USN, tees off on his way to becoming All-Navy Men's Open Champ.

Playing a calm and determined game, LCDR Kinder had to sink an 18-foot putt on the 72nd hole to avoid a three-way tie and a play-off in the All-Navy Finals at the Navy Memphis Golf Course. While the gallery speculated on his chances, the steel-nerved Open champion carefully studied the green, lined up the putt, stroked the ball and watched it drop in the left side of the cup for his second All-Navy crown in three years. He posted rounds of 75, 71, 68 and 73.

A veteran of 30 years' service, LCDR Kinder won his first championship in the San Diego City Tournament in 1935 and has been winning ever since. Some of his more important titles include All-Navy Eastern Championship in 1955, Sixth Naval District runner-up in 1957 and the South Atlantic Regional Championship. LCDR Kinder has been invited to play in the Bing Crosby Pro-Amateur Golf Tournament at Pebble Beach, Calif., 9-12 Jan 1958.

The runner-up All-Navy spot was jointly occupied by LTJG Fred S. Blackmar, USN, a pilot from VAAW-35, NAS North Island, Calif., and ENS Bruce H. Cudd, USN, Special Services Officer with the Naval Administrative Unit, Clarksville, Tenn. Both shot even par golf—288. LTJG Blackmar, who hails from Luling, Texas, placed third in the National Caddie Tournament in 1950, won the Texas lefthanders Tournament in 1950 and 1951, joined the Navy in 1955 and won the South Eastern Regional Tournament the same year. He took runner-up honors in the South Pacific Regional Golf Tourney in 1957.

ENS Cudd, a native of Portland, Ore., reached the semi-finals of the U. S. Amateur in 1953. He won the Western Amateur Championship in 1954 and was a member of the U. S. Walker Cup Team in 1953. ENS Cudd joined the Navy in Sept 1956, was a runner-up to LCDR Kinder in the South Atlantic Regional Tourney and the 1957 All-Navy, one stroke off the pace in each case.

In the Senior Division, CAPT Richard C. Harwood, USN, from NavSta Newport, R. I., captured runner-up honors with a 316. Before coming to the All-Navy, CAPT Harwood won both the First Naval District and the North Atlantic Regional Senior Championships.

In the Women's Division, Wave Estelle E. St. Clair, PN2, established an eight-stroke lead at the end

Top Finalists in All-Navy Golf Championships

Here's a rundown on the top finalists in the 1957 All-Navy Golf Championship. The asterisks indicate players who represented Navy in the Inter-Service Golf Tournament.

OPEN DIVISION	Score
*LCDR James W. Kinder, USN NAS Pensacola, Fla.	287
*ENS Bruce H. Cudd, USN Clarksville, Tenn.	288
*LTJG Fredrik S. Blackmar, USN NAS North Island, Calif.	288
*LCDR Robert Q. Wallace, USN HS-7, NAS Norfolk, Va.	292
*John F. Kalinka, ET1, USN NavCommSta Seattle, Wash.	294
James Taylor, SN, USN NavPhiBase Little Creek, Va.	295
LCDR William G. Whisler, USN HS-7, NAS Norfolk, Va.	295
William C. Mitchell, BMI, USN NAS Akron, Ohio	296
CDR Adam A. Borylo, USN NavSta Newport, R. I.	300
Harold E. Jacobson, PNSN, USN USS *Pictor* (AF 54)	301
LTJG Donald R. Glass, USN NAS Moffett Field, Calif.	301
Ben F. Jennett, AMC, USN NATTC Memphis, Tenn.	301
Arthur H. Neely, ADC, USN Staff ComAirPac	301
LTJG Bedford C. Bradley, USN NAS Barbers Point, Oahu, T. H.	302
Earvin Scott, EM1, USN USS *Fidelity* (MSO 443)	303
LT Robert M. Ware, USN NTC Great Lakes, Ill.	307
Raul M. Hernandez, SN, USN USS *Wiseman* (DE 667)	309
Gene D. Brehault, SN, USN NAS Whidbey Island, Wash.	310
Clement L. Letourneau, EMC, USN USS *Stark County* (LST 1134)	310
Albert J. Kollmyer, GMC, USN USS *Cassin Young* (DD 793)	313
LT Arthur G. Spahr, USN ComFleTraGru, San Deigo, Calif.	315
Thomas W. Ballew, SH2, USN Staff ComServPac	316
Allen B. Miller, AMC, USN NAS El Centro, Calif.	316

The top three finalists in the Senior and Women's Divisions are:

SENIOR DIVISION	
*CWO, W-3 Walter Axcell, USN NAS Barbers Point, Oahu, T. H.	305
*CAPT Richard C. Harwood, USN NavSta Newport, R. I.	316
LCDR James B. Brown, USN NAS Oceana, Virginia	328

WOMEN'S OPEN DIVISION	
Estelle E. St. Clair, PN2, USN-W NTC Bainbridge, Md.	357
Sarah J. Jackson, PNC, USN-W RecSta San Deigo, Calif.	373
Margaret L. Cozad, PN1, USN-W NTC San Diego, Calif.	381

NAVY'S SENIOR players in Inter-Service Golf Tournament were CW03 Axcell, CAPT Harwood, CDR Sias.

of the first 18-hole round and was never seriously threatened after that. During a practice round before the tournament, she had the distinctive honor of qualifying for a Navy Hole-in-One Achievement Award by dropping her tee shot in the 132-yard 14th hole. Wave St. Clair also won the Fifth Naval District Women's Open Championship and the All-Navy Women's Championship for a Navy Women's Gold grand slam.

Runner-up honors went to Sarah J. Jackson, PNC, USN (W), RecSta San Diego. Chief Jackson played good steady golf throughout the tournament but was unable to catch the new All-Navy Women's Champ. She won the Eleventh Naval District Women's Crown and the South Pacific Regional Women's Championship earlier this year. She is a native of Bellwood, Pa., and a graduate of Penn State.

Shortly after the last score was posted, RADM Frank Akers, Chief of Naval Air Technical Training, presented All-Navy Golf Trophies to LCDR Kinder, CWO Axcell and PN2 St. Clair.

Tennis Championships

ARMY had the biggest guns in this year's Inter-Service rivalry on the tennis courts.

If you don't believe that, just ask any of the 10 All-Navy finalists or the Airmen and Marines who literally took the white-washing of their lives in the recent Inter-Service Tennis Championships held in Washington, D. C.

Not only did Army win the coveted Leech Cup—symbol of team supremacy in Inter-Service Tennis—but for the first time in tournament history, they swept all the individual and doubles as well.

This year's victory enabled the Army to take home the Leech Cup for the fifth time since it was donated in 1924. To date, Navy has won it 10 times—the first nine in a row before bowing to Army in 1939. The Air Force has won it twice out of its three bids while the Marine Corps has yet to win the title.

All-Navy finalists who participated in this year's Inter-Service Tennis Championships at the famed Army-Navy Country Club in Washington, D. C., 20-24 August included:

Richard D. Klitch, SN, USN, from ComServPac and Roger M. Bielefeld, YNT3, USN, of the destroyer escort USS *Sproston* (DDE 577), the All-Navy open doubles champs; CAPT Jesse B. Gay, Jr., USN, CO of the Fleet Sonar School at San Diego, the All-Navy Senior Singles and Doubles title holder; CWO Glendice Tidall, USN, of NavSta Long Beach; William C. Cullen SN, USN,

RETAINER — CAPT J. B. Gay, Jr., USN, is still the senior All-Navy Singles and Doubles tennis title holder.

Rundown of Players in All-Navy Tennis Tourney

SOUTH PACIFIC

Open Division

- John Hironimus, SN, USN, ComAirPac
- David Inman, SA, USN, USS *Kearsarge* (CVA 33)
- CDR John R. Behr, USN, NAMTC Point Mugu
- ENS Ray Entz, USN, San Diego

Seniors

- CAPT Jesse B. Gay, Jr., USN, Fleet Sonar School, San Diego
- CWO Glendice B. Tindall, USN, NavSta Long Beach

NORTH PACIFIC

Open Division

- ENS Seth Petersen, USN, NAS Moffett Field
- LTJG Lawrence Zaitzeff, USN, 13 ND
- LCDR William O. Foulkes, USN, ComFair Alameda
- LTJG Robert Nott, USN, NAS Whidbey Island

Seniors

- CAPT William L. Maloney, USCG, 13 ND
- CAPT Albert Kohlhas, USN, 12 ND

WESTERN PACIFIC

Open Division

- Richard Klitch, SN, USN, ComServPac
- Roger Bielefeld, YN3, USN, USS *Sproston* (DDE 577)
- LTJG Arthur Fish, USN, PatRon-6

Seniors

- None

ATLANTIC FLEET

Open Division

- William Cullen, SN, USN
- CDR Kendall Jones, USN
- Lorey Hunt, SN, USN
- LTJG Arthur Jett, SN, USN

Seniors

- CAPT. William Siedel, USN

NORTH ATLANTIC

Open Division

- ENS Duane E. Gomer, USN, Rhine River Patrol, NELM
- Cecil L. Wilson, ADC, USN, VR-24, Port Lyautey, French Morocco
- ENS George Kesel, USN, NavSecSta Washington, D. C.
- ENS Michael Schwartz, USCG, Washington, D. C.

Seniors

- CDR John Ramee, USN, NYGruLantResFlt.
- CDR Fred Kriz, USN, Naval Gun Factory, Washington, D. C.

SOUTH ATLANTIC

Open Division

- LTJG Richard T. Gaskill, USN, NAAS Corry Field, Pensacola
- ENS Kingdon Van Nostrand, USN, NAS Pensacola
- David Rosenbaum, AN, USN, NAS Corpus Christi
- ENS Richard Daniels, USN, NAS Pensacola

Seniors

- CDR Joseph T. Watson Jr., USN, Ellyson Field, Pensacola
- CAPT Robert B. Hutchins, USN, NAS Pensacola

BEARING DOWN — All-Navy Open Singles Division title was copped by ENS Seth Petersen, NAS, Moffett.

of DesLant, who was the All-Navy open singles runner-up; LTJG Richard T. Gaskill, USN, WestPac; ENS Duane E. Gomer, USN, Rhine River Patrol, NELM; John Hironimus, SN, USN, AirPac; and CDR Joseph T. Watson, Jr., USN, Ellyson Field, Pensacola.

ENS Seth Petersen, USN, of NAS Moffett Field, won the All-Navy open singles division. He was unable to compete in the Inter-Service matches because of his scheduled flight training.

Representing the North Pacific region in the All-Navy finals, ENS Petersen downed Bill Cullen from the Atlantic Fleet in the finals in three straight sets—6-3, 6-1 and 7-5. Petersen lost only one set in the entire open singles tournament and that was against Seaman Dick Klitch in the quarter-finals.

DesLant's Bill Cullen earned the right to play Petersen for the open championship by defeating ENS Duane E. Gomer of the Rhine River Patrol in the semi-finals 8-6, 3-6, 0-6, 14-12, 6-2 after coming back from behind in a tight fourth set.

In the All-Navy open doubles tournament, Klitch and YN3 Bielefeld, playing in WestPac colors, had a tougher time in taking the title from SouthLant's LTJG Dick Gaskill and ENS Kingdon Van Nostrand but claimed the laurels with a 6-8, 4-6, 6-4, 10-8, 6-2 score after being down two sets. To gain their notch in the finals, Klitch and Bielefeld had to come from behind to beat Hironimus and Dave Inman, SA, USN (USS Kearsarge, CVA 33), 5-7 3-6, 6-2, 7-5, 6-3.

Gaskill and Van Nostrand took three straight sets from LTJG Art Fish, USN, of PatRon Six, and LTJG George Woods, VW-16, winning handily by 6-4, 6-3, 6-2 to qualify.

CAPT Jesse B. Gay, Jr., USN, retained the senior singles title (open to players over 40 years of age) which he won a year ago at Newport, R. I., by downing co-finalist CDR Joseph T. Watson, Jr., of SouthLant, 6-0, 6-2. He also repeated in the senior doubles, but with a new partner, CWO Glendice B. Tindall, USN, NavSta Long Beach, downing CDR Fred Kriz, USN of NavGun Factory, Wash., D. C., and CDR John Ramee, USN, (NYGruLantResFlt) 6-2, 7-5.

THIEF GETS CAUGHT—Coast Guard's Reider is tagged out by Pensacola's Karpwich as he tries to steal home.

All-Navy Baseball

SUBPAC CAPTURED the 1957 All-Navy Baseball Championship by torpedoing its opponents, one-two-three.

The tourney was completed too late for the full report of the game to be made before this issue went to press.

The Pacific Fleet Submariners scored 35 runs in the three games they played during the Navy's "World Series" while their outclassed opponents registered a mere six.

The opening day of play at the U.S. Coast Guard Receiving Center, Cape May, N. J., saw SubPac down the host Coast Guard

CHAMPS—Hawaii's SubPac nine emerged victorious from the 1957 All-Navy Baseball Championship tournament.

nine 13-3, while the Amphibs from Little Creek, Va., swamped NAS Pensacola 11-1.

NAS North Island, who drew a bye in the first day of play, downed the Amphibs, 1-0, while Pensacola bounced back and eliminated the Coast Guard from the tournament by a 12-3 score to complete the second day of the double elimination tournament.

The third day of action was highlighted by the airdales from Pensacola defeating the Gators, 3-1, to take them out of the race. SubPac continued its victory march by defeating North Island 12-0.

In the semi-finals, Pensacola eliminated NAS North Island with a 5-3 win and earned the right to face SubPac in the finals.

SubPac took Pensacola in stride—to the tune of 10-3, and with it the 1957 All-Navy Championship.

—H. George Baker, JOC, USN

Edisto Indoctrinates Blue Noses

All ships in the Navy—the icebreaker USS *Edisto* (AGB 2) included—have a serious mission to perform. And, as with all of these ships, it never becomes so serious that some time during the trip a few hours can't be set aside for a little skylarking.

Edisto's horseplay was brought on by the Arctic Circle Line crossing ceremony when Boreas Rex convened his Court of the Royal Order of Blue Noses. The formal initiation ceremony, set up under his direction, brought 127 of the uninitiated 219-man crew into the select order.

The serious part of *Edisto's* mission centers about her tough bow. She smashes a path through heavy ice concentrations ahead of escorting ships carrying cargo, petroleum, oil, and lubricants to military installations dotting the top of North America from Alaska to Greenland.

For the "Wind" class icebreaker *Edisto* this was not her first resupply expedition to the Arctic. She has participated each year since 1948. In 1955 she doubled up by taking part in similar operations at the opposite end of the world.

In 1955 she formed a part of Task Force 43 on Operation Deep Freeze I, in the Antarctic. Many of the crew still aboard were initiated at that time in the Royal Order of the Emperor Penguin (Neptune's southern name), the honor bestowed on those crewmembers crossing the Antarctic Circle Line for the first time.

SIDELINE STRATEGY

FOOTBALL SEASON is here and don't underestimate Navy's own "big" blue and gold eleven. If the results of spring practice are any indication, then the Mids' opponents should take heed. According to John Cox, Director of Naval Academy Sports Information, here are a few reasons why:

- The Mids halted their spring drills after only 17 days of practice when Coach Eddie Erdelatz said, "We accomplished our mission" and it was "The best spring practice we ever had."

- The 1957 line, which averages 213 pounds, will be the heftiest in Navy's football history.

- Tom Forrestal, who was in a three-way race for the Navy quarterback assignment last year, has exhibited newfound poise and finesse in ball handling and passing, and is now the Navy's No. 1 signal caller.

- Twenty-four players, 16 of them letter-winners, are back from the '56 squad which lost only to Tulane. To this group has been added a dozen of last year's plebe team who have shown "varsity potential."

- Big Bob Reifsnyder, a 235-pound tackle who made All-America honorable mention last year as a sophomore, successfully made the switch from tackle to center thereby filling a gap that figured to be a trouble spot this season.

- Captain Ned Oldham, the team's leading groundgainer for two seasons, is "running better than ever" at left halfback.

- Al Swanson, a 190-pound reserve, has capably filled the only vacancy created in the '56 starting lineup by graduation.

- Navy's first team is made up of all veterans. It has Pete Jokanovich (209) and Wayne McKee (190) at ends; Tony Anthony (218) and Jim Martinez (235), tackles; Bob Caldwell (194) and George Fritzinger (200), guards; with Reifsnyder (235) at center. The backfield lines up with Forrestal (178) at quarterback; Oldham (190) and Swanson (191), the halfbacks, and Dick Dagampat (170) the lightest man on the team, at fullback. Swanson is the first unit's only non-letterman.

★ ★ ★

Seaman Apprentice Al Wharton, USN, who is playing tackle for the NTC Bainbridge "Commodores," played in the Annual All-Star Game against the New York Giants at Soldiers Field, Chicago on 9 August. In addition to the All-Star Game, he played in two Sugar Bowl Classics and a post-season Blue-Gray Game.

★ ★ ★

During the recent U.S. Navy Rifle and Pistol Championships, Gasper P. DeFino, TM2, USN established a new All-Navy Pistol Record by firing a 564 out of a possible 600. —H.G.B.

Breif news items about other branches of the armed services.

A NEW LIGHTWEIGHT, DURABLE ASSAULT BOAT has been developed by the Army Corps of Engineers, Fort Belvoir, Va. Carrying its full crew of 15, the pneumatic-type craft can attain speeds of more than 7 miles per hour by use of a 25-hp outboard motor, or 3.3 mph by hand-paddling.

Constructed of neoprene-coated nylon, the boat consists of a main flotation tube, an air-mat bottom, a thwart tube connecting the main flotation tube amidship, and a four-inch spray rail.

The main tube is 18 inches in diameter and is divided into six compartments by hemispherical bulkheads. Division of the tube permits as many as four compartments to be damaged with the boat still remaining in action.

The boat is equipped with two large and one small inflation-deflation pumps, a repair kit and 11 five-foot paddles. A carrying case fabricated of cotton duck is also provided. With equipment, it weighs 255 pounds. Inflated size is 17 feet long, 5 feet 8 inches wide.

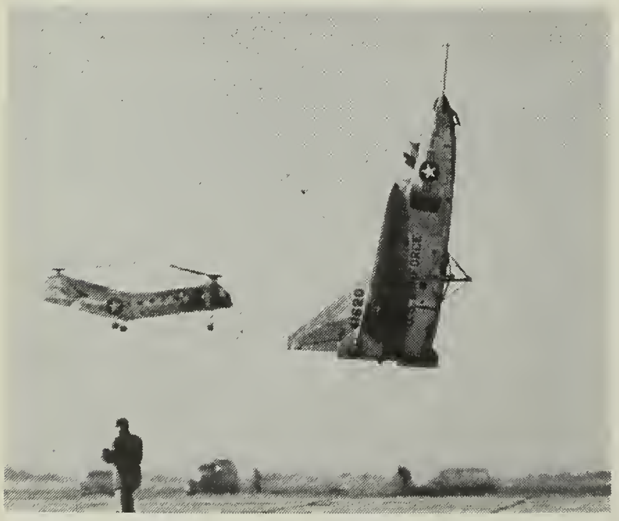
The boat may be dropped from planes and can be readily carried by six men.

★ ★ ★

THE AIR FORCE NOW HAS the world's first vertijet. Called the X-13, the pure jet VTOL research plane has the unique ability to take off vertically, quickly make the transition to high speed horizontal flight, then return to vertical hovering at zero air speed and hook on to its ground service trailer.

Rising and descending on a column of seething exhaust gases, the X-13 depends solely upon thrust from its jet engine for both direct lift and high speed conventional flight.

Most unusual feature of the X-13 and the key to jet VTOL flight is it ingenious jet reaction control system which provides complete control of the airplane during hovering and near-zero speed flight.


A REAL BOOST—Air Force's new X-13 *Vertijet* depends solely on thrust from jet for lift, flight, and landing.

WATT A LOT—Army's tiny 'helmet' radio is dwarfed by mighty 'world-spanner' transmitter-housed 50-foot room.

A MISSILE-TRACKING CHAIN of floating bases in the Atlantic Ocean is being established by the Air Force.

To be located between the islands of St. Lucia and Ascension, it will fill the missile tracking gaps that now exist along the Air Research and Development Command's 5000-mile missile test range, which is used for firing long-range missiles.

Links of the chain will be six "telemetry ships," spaced out along a 3000-mile line. Special electronic equipment aboard these "Ocean Range Vessels" will record data concerning missile tests and transmit the information to the Range Control Station of ARDC's Air Force Missile Test Center at Cape Canaveral, Fla.

The ships selected for this purpose are modified, 178-foot Army FS (Freight Supply) vessels, which will be able to remain at their stations for as long as three weeks, if necessary. Usually, however, they'll be on station only while missiles are actually being tested. Between missions they'll return to the South American ports of Recife and Belem, Brazil; and Georgetown, British Guiana.

The electronic brain of each ship will be the telemetry center in her Number Two Hold, which has been de-humidified, air conditioned, soundproofed and insulated to insure the accuracy of data recorded by the ship's telemetry antennas. The antennas are housed in twin plastic radomes above the bridge.

Modification of the six ships and installation of electronic equipment in them cost more than two million dollars.

In addition to these craft, five 340-foot Maritime Service C1MAV1 ships are now undergoing modification and are due for commissioning early in 1958. They will be used to supplement the telemetry operations by recording impact data on missile tests.

★ ★ ★

A "ROBOT" TRACTOR that can be operated anywhere within range of the radio by which it is controlled is undergoing tests by the Army.

From a jeep or helicopter equipped with a standard military radio transmitter and a special control box, the operator can start and stop the machine, engage and disengage the gears, operate in forward and reverse, manipulate the dozer blade up and down, and activate the steering mechanism.

Normal operations can be performed from distances up to 15 miles simply by manipulating the buttons on the control box. Army Engineers believe that the installation of small television cameras on the tractor will give the remote operator additional knowledge and observation of the machine, and give him the ability to work it without the need of information relayed by a visual observer.

The prototype is the standard commercial bulldozer. The only visible change to the machine is the substitution of a standard military radio receiving set for the operator's seat. Manual controls have been retained for conventional operations.

As a safety precaution, early tests have been conducted with the tractor and control point within viewing distance. It will be operated from greater distances as the test schedule progresses.

★ ★ ★

THE BULKY CANISTER-TYPE GAS MASK soon may be eliminated from the Army.

A "revolutionary" protective mask designed to give the soldier complete protection against inhalation of war gases, germ warfare agents and air-borne radioactive fall-out particles is under limited production.

A small number of the new masks have already been delivered to the Army Chemical Center, Edgewood, Md., for final engineering tests. At the same time, production models are being tested before large scale production for troop use.

The mask is made of a new lightweight, pliable gas-aerosol filter material. Pads of the material are inclosed within cavities molded into the mask's facepiece.

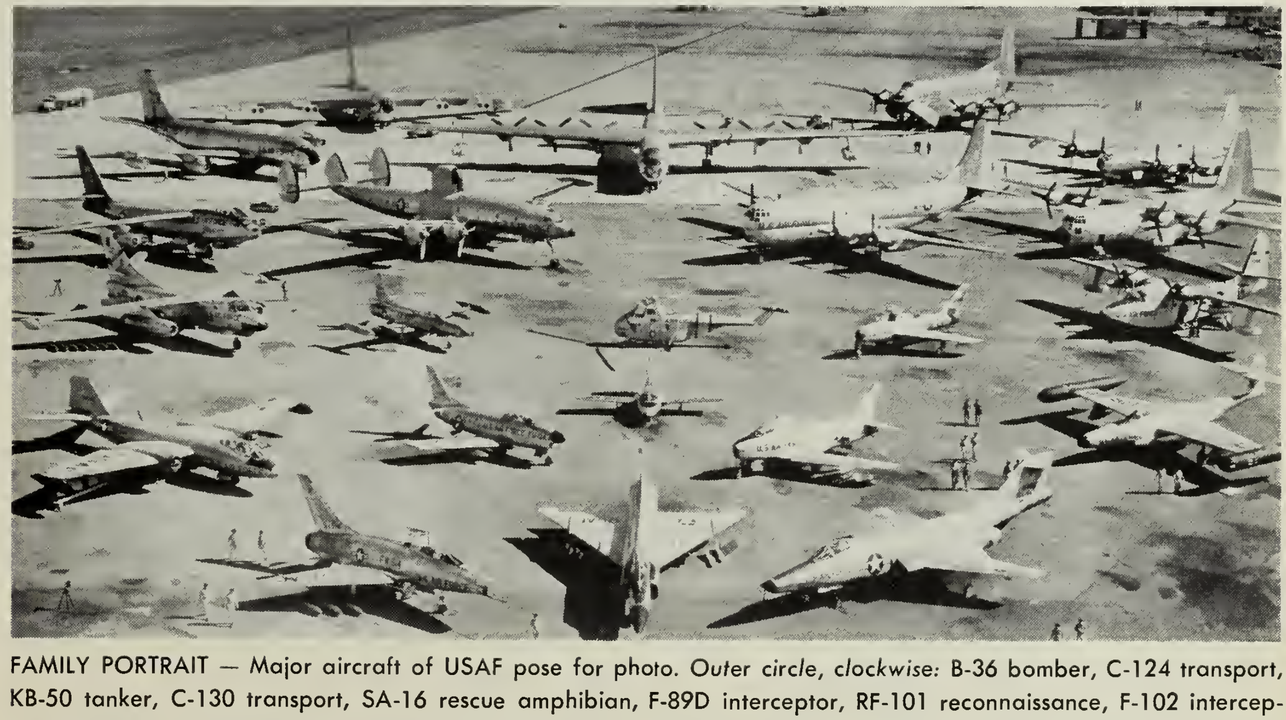
SPECIAL DELIVERY—Army helicopters are being used as time and labor savers. Here copter helps build bridge.

The new mask is claimed to be more comfortable than current model, affords better vision and transmission of speech, and allows wearer to breathe easily.

★ ★ ★

THE ARMY HAS DEVELOPED a new spark and flame arresting muffler to reduce the fire hazard created by truck exhaust in congested areas where combustibles are stored.

The new device is a combination consisting of two separate sections—the muffler and the spark and flame arrester. It was designed primarily for use on gasoline-engined fork-lift trucks of 4000-pound capacity, which work in warehouses and other storage spaces.



FAMILY PORTRAIT — Major aircraft of USAF pose for photo. *Outer circle, clockwise:* B-36 bomber, C-124 transport, KB-50 tanker, C-130 transport, SA-16 rescue amphibian, F-89D interceptor, RF-101 reconnaissance, F-102 interceptor, F-100 fighter, B-57 bomber, B-66 bomber, B-47 bomber, KC-135 tanker, B-52 bomber. *Inner circle:* KC-97 tanker, F-84F fighter, F-86 fighter, T-37 jet trainer, F-86D interceptor, F-94C interceptor, RC-121 tanker. *Center:* H-19 copter.

THE WORD

Frank, Authentic Advance Information On Policy—Straight From Headquarters

• **NOVEMBER EXAMS**—The date for the service-wide competitive examinations for advancement to pay grade E-4 in specific ratings has been scheduled for 7 November. This exam will be used for advancement of USN and USNR personnel on active duty with the Regular Establishment only. The November exams will NOT be administered to TAR personnel.

The rates for which examinations will be given are:

ACW3, ACR3, ACT3, AEM3, AEI3, AG3, AMS3, AMH3, AQB3, AQF3, ATR3, ATS3, ATN3, BT3, CT3, EM3, ETN3, ETR3, ETS3, GF3, GS3, IC3, MM3, PRS3, PRM3, QM3, RD3, SM3, SO3, and TM3.

The CAA Control Tower Operator Certificate requirement for advancement to ACT3 may be waived in the case of personnel assigned to those few overseas stations where it is not practicable for them to be examined by a CAA representative.

Regular Navy personnel competing for advancement to pay grade E-4 of those ratings in which selective emergency service rates have been activated will be recommended for and advanced only to the selective emergency rates. Regular Navy personnel examined for other rates will be advanced in the general service rates. Reserve personnel on active duty will be advanced to that related emergency service rate which is in their normal path of advancement or for which they have been trained.

Changes of rating examinations will be administered for horizontal changes of rating at all pay grade levels as individually authorized by the Chief of Naval Personnel.

Those who took part in the August exams may not compete in November.

• **ADVANCEMENT INFO**—Your path of advancement will soon be open if you are an E-4 in the ACR, ACT, PRS or PRM Selective Emergency Service Rates which are to be activated for second class petty officers this fall, or if you are striking for the already open ACW2 rate.

The activation was effective for Air Controlman W (airborne CIC operator) on 1 Jul 1957. Air Controlman R and T (radar and tower) and Parachute Rigger M and S (maintenance and survival) will become effective Nov 1957. Regular Navy and TAR personnel may use the rates.

The three Air Controlman rates were opened because of the lack of available facilities to permit E-4 personnel in the rates to complete their practical factors for advancement to AC2. Their formal training was so specialized that difficulties were experienced in completing practical factors for advancement. (Example: ACW3 personnel received formal training at the Radarman Class A School and were examined for advancement through use of the RD3 examination.)

In the Parachute Rigger rates, many of the men advanced to PRM3 have not had the opportunity to complete the parachute packing and jump course necessary for advancement. Consequently the Navy has opened the PRS2 and PRM2 rates so that opportunity to advance will be available to men in these rates.

The first service-wide examination for ACW2 was held last August. Second class exams for the other four rates will be conducted next February.

Announcement of the opening of the rates was made in BuPers Notice 1223, 28 Jun 1957.

• **REQUIREMENTS FOR ATOM SUB TRAINING**—Your chances to qualify for the Submarine Nuclear Power Training Course have been increased. USN Hospital Corpsmen in pay grades E-6 and E-7 and Machinist's Mates, Enginemen, Electronics Technicians, Electrician's Mates and I. C. Electricians in pay grades E-3 through E-7 are still needed for training in the field of nuclear power.

Here are the changes in the eligibility requirements:

- Up to now, you must have had a minimum of 48 months of obligated service at the time you reported for the course. Now, you are required to have a minimum of only 40 months of obligated service at the time you report, or be willing to extend your enlistment or reenlist. Extensions for 30, 60, 90, 120, 150, 180, 210, 240, 270, 300 or 330 days are authorized in order to have the total of 40 months' active obligated service.
- Previously, you must have been a high school graduate. This requirement no longer exists.
- Before the change went into effect, the maximum age limit was 30 years. This requirement also has been removed.

The remaining eligibility requirements are still the same. You must:

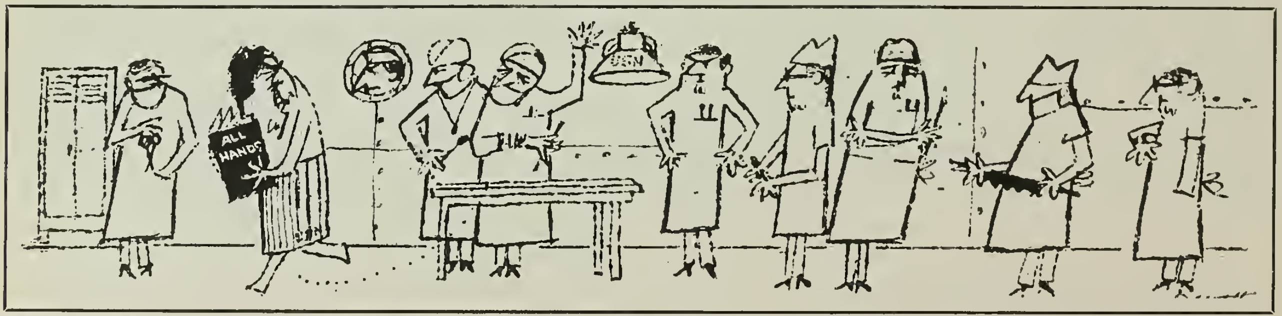
Be designated "Qualified in Submarines."

Be physically qualified for submarine duty.

Volunteer for the program.

Have a minimum combined ARI/MECH score of 105.

Additional information concerning the program and application procedure is in BuPers Inst. 1540.33A.



DON'T HOLD UP OPERATIONS—Remember, nine men are waiting for you to *pass on this copy of ALL HANDS.*

• NEW COURSES FOR ATs, AQs AND GFs—Two new courses have been established to replace the 23-week Class C Air Launched Guided Missiles (General) Maintenance Course which was outlined in the March 1957 issue of ALL HANDS (page 52).

They are a 10-week *AERO 19G Control System Maintenance Course* and an eight-week *Sparrow III Guided Missile Maintenance Course.* Both are rated as Class "C" Schools and are conducted at NATTC Jacksonville, Fla.

Personnel eligible to attend these courses are ATs, AQs, and GFs in pay grade E-5 and above, or Marines of equivalent ratings. Personnel in pay grade E-4 of these ratings are also eligible if they are specifically recommended by their commanding officer and have had one-year Fleet experience in armament control systems or guided missiles and associated test equipment.

Classes for the *AERO G19* course, requiring Confidential clearance, convene every two weeks while those for the *Sparrow III* course, requiring Secret clearance, begin every six weeks.

Requests for both these new courses are desired from personnel now serving ashore. However, consideration will also be given to eligible personnel on sea duty.

Individual requests should be submitted, via the chain of command, to the Chief of Naval Personnel (Pers B213) or on the Shorvey Data Cards.

• GOT A SENSAYUMA? — Don't forget to enter the Third All-Navy Comic Cartoon Contest.

Your entries must be submitted to the Chief of Naval Personnel (Pers G11) in time to be judged on 31 December.

• HONORABLE DISCHARGE STANDARDS—New minimum standards, based on the Enlisted Performance Evaluation marks, have been set for future issuance of an Honorable Discharge.

In order to receive an Honorable Discharge at the end of an enlistment, a member of the service will have to post a 2.7 over-all average and a 3.0 average in military behavior. Also his record must be free of any general court-martial conviction or more than one conviction by a special court-martial.

However, during the first enlistment provisions relative to courts-martial will be disregarded provided an average of 3.0 in military behavior is maintained during the last 24 months of active duty.

If a commanding officer feels that a man should receive the Honorable Discharge even though these requirements are not met, he may submit a recommendation to the Chief of Naval Personnel.

• NEW HAMPSHIRE BONUS—If you are eligible for a WW II or a Korean bonus from the State of New Hampshire and haven't applied for it yet, you'd better hurry. The deadline for mailing your application is 1 Jul 1958.

To be eligible for the WW II bonus you must have served more than 90 days between 7 Dec 1941 and 31 Dec 1946, inclusive, and must have received a discharge under conditions other than dishonorable. You must also have been a bona fide resident of the State of New Hampshire at the time of entry into the service.

Eligibility requirements for the Korean bonus are: a minimum of 90 days' service between 25 Jun 1950 and 27 Jul 1953; one year pre-service residency in the state.

Application blanks may be obtained from most veterans' organizations or from the State Adjutant General's Office, State Military Reservation, Concord, N. H.

• MINNESOTA BONUS FOR KOREAN VETS—The Minnesota state legislature has voted a bonus for veterans of the Korean conflict.

Veterans who qualify for the Korean Service Medal will be entitled to $15 for each month of overseas service, and $7.50 a month for stateside service—up to a maximum of $400—between 27 Jun 1950 and 27 Jul 1953.

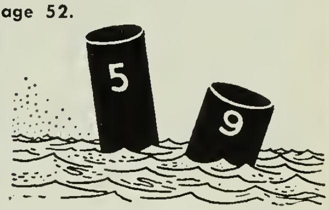
Other veterans who did not serve in Korea between these dates will be entitled to $7.50 per month for both overseas and stateside service, up to a maximum of $200.

Servicemen who were on continuous active duty in the armed forces for four years before 27 Jun 1950 will not be eligible for the bonus.

Applications may be obtained from the Department of Veterans Affairs, St. Paul, Minn. However, bonus payments will not begin until 1 Jan 1959.

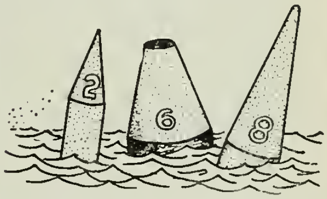
QUIZ AWEIGH

No doubt you have heard about the "mail buoy" watch who wouldn't leave his station until properly relieved? When asked by his skipper who assigned him to his station, he replied a boatswain's mate named Charlie Noble. Well, this quiz isn't any joke nor is it about mail buoys; it's about real buoys. To be assured that buoys are buoys, you can check the answer to this month's quiz on page 52.



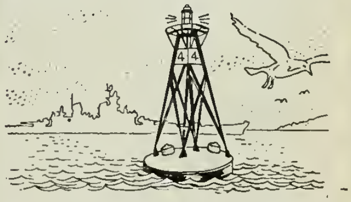
1. Here are two buoys which always bear odd numbers. They are (a) spar buoys (b) nun buoys (c) can buoys.

2. You should always remember that these buoys mark the port side of a channel as you enter from seaward. They are painted (a) red (b) black (c) yellow.



3. As you can see, these nun buoys have even numbers painted on them. They are used to mark (facing inland) the (a) starboard side of a channel (b) port side (c) middle of the channel.

4. If you saw a nun buoy painted yellow, it would indicate (a) an area that has been mined (b) quarantine anchorage (c) dredging area.



5. Lighted buoys are extremely important as they provide invaluable assistance to the navigator in checking his position and warning him of danger. A quick flashing buoy denotes that particular caution is required. They flash (a) not less than 60 times per minute (b) not more than 30 times per minute (c) 12 times per minute.

6. An interrupted quick-flashing light on a buoy indicates (a) there is a better channel to starboard (b) a better channel to port (c) no preferred channel.

THE BULLETIN BOARD

How You and Your Family Travel by MATS to Overseas Station

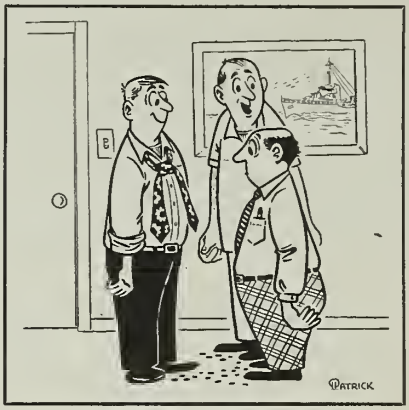
A PETTY OFFICER, first class, who was on duty on board a destroyer in the Atlantic, steps off a MATS plane with his wife and two children in Paris, France, to begin a new tour of duty. Suppose you were this man. Just what would you have to do, and what would have been done for you, to get this MATS flight?

In order to be eligible for the transportation of your family, you must be E-5 or above, or E-4 with over four years in service, and the orders must specify that government transportation is authorized. Right here you have a choice. You can request surface or air transportation for your dependents (and get it).

You may travel by yourself, leaving your dependents behind until you get established in your new duty station. Then you may send for them, letting them travel (at your choosing) by surface or air transportation.

Or suppose you decide to travel to Paris by MATS and take your dependents with you. After you have discussed the situation with your wife, found out when your household effects could be shipped, and agreed on a specific date when you would be at the port of aerial embarkation, you fill out DD Form 884 and send this, together with three certified copies of your orders to the Chief of Naval Personnel (Pers B313).

Make sure that you have allowed your family plenty of time to receive the necessary immunization shots and, once you have set a departure date far enough ahead to allow for planning purposes, the Bureau will take over. They will assign an Air Movement Designator, allotment of space, a reservation assignment and establish a priority. All of this information and more, including the flight number and information on living conditions in the area where you are to be assigned, will be sent by mail to your wife. You will be notified of the arrangements by message.

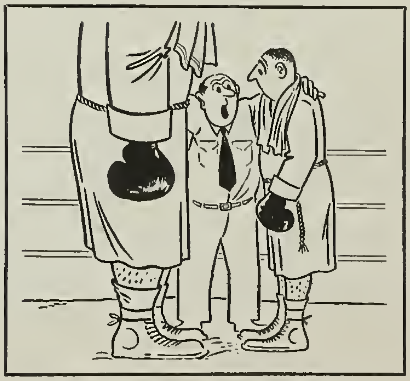


"Mitchel's been out of the Navy a week now, Charlie!"

Since passports are needed for dependents in all areas west of Honolulu and everywhere in Europe, the Bureau of Naval Personnel, acting on your application, will send passport forms to your wife and notify her where she can make application for her passport.

Don't fret too much when you see a Class 3 priority on your orders. Of course, you *can* be bumped. But you are *almost* guaranteed that you and your dependents will *not* be bumped.

For air transportation to points overseas in the Pacific area, the procedure is the same. Only exception is that the three certified copies of your orders and the DD Form 884 would be sent to the Commandant of the 12th or to the 13th Naval District for travel to Alaska. From there, everything will be taken care of just as the Bureau does for areas off the eastern coast.



"Come now, where's your fighting spirit?"

You will be allowed a baggage allowance of 65 pounds. Your wife and each child will be authorized 100 pounds of baggage.

If you are being transferred to an area where entry approval is required, Pers B313 in the Bureau of Naval Personnel will make this request for you. Suppose this entry is denied to your dependents. When you leave your old duty station, you are authorized, at government expense, transportation for your dependents from the place where they are located (when you received your change of station orders) to any place in the United States you designate. The same holds true if you are permanently transferred to a station where dependents are not permitted to accompany you, or if you are assigned to a non-rotated ship or unit overseas for contemplated periods of more than 12 months.

Later, when and if the restriction is lifted, your dependents can get transportation from the place where they are living to a port of debarkation and join you by way of government air or surface transportation, again depending upon your decision on how they should travel.

You can cause yourself and your dependents quite a bit of distress by reporting to the port of aerial embarkation without your necessary shots or by arriving earlier or later than the date specified. If this happens, you will be held until the clearance is negotiated or, if time does not permit, may be diverted to surface transportation.

If you are already overseas and are homeward bound, the cognizant overseas commander will assign Air Movement Designators, space and reservation for travel to the nearest port of aerial entry to CONUS.

Once you are at the aerial embarkation port and have the necessary clearance, you will receive a briefing, board the plane, take off and be assured of a pleasant journey and a happy landing at the hands of competent MATS personnel.

Deadlines Set for Wearing Large Medals, Rules Given For Free Reissues, Purchases

Here are procedures for obtaining a reissue of the large medals which are now required on the full dress CPO uniforms, and which will also be required in the future for all enlisted personnel for wear on formal occasions. The regulations were announced in BuPers Notice 1020, 25 Jun 1957.

A needed medal will be replaced without charge only if it has been lost, destroyed or rendered unfit for use without fault or negligence on your part. In any other case a replacement charge will be made (according to charges listed in an enclosure to the notice).

Your commanding officer will determine whether you are eligible to receive a reissue without charge or whether the replacement must be purchased. If the medal is to be purchased, the CO will collect the proper amount. He will forward requests for bulk issue of medals for CPOs in his command as soon as possible. Requests for medals for other pay grades will be submitted no earlier than 60 days before the date that medals will be required.

The larger medals will be required for wear on the following dates, according to rating: E-6, 1 Jan 1958; E-5, 1 Jul 1958; E-4, 1 Jan 1959; and E-3 and below, 1 Jul 1959.

The initial distribution of all medals except the Korean Service Medal and National Defense Service Medal has been made and it is assumed that all enlisted personnel have received their initial issue.

If an original medal issue was not received, however, you may apply through your commanding officer to the Chief of Naval Personnel (Attn: Pers E3) for the appropriate awards.

The Korean Service Medal and National Defense Service Medal are not available for distribution to naval personnel. Additional instructions will be issued concerning their distribution, possibly about 1 Jan 1958.

The wearing of large medals by enlisted personnel was concurred in by the Permanent Naval Uniform Board and approved by SecNav after many requests were received for a full dress enlisted uniform. The full dress officers' uniform with sword and large medals was authorized in 1954.

Course for Medics On Control of Disease

The Medical Department correspondence course, ***Control of Communicable Diseases in Man*** (NavPers 10772) is now available to Regular and Reserve officers and enlisted personnel of the Medical Department. This course covers both rare and common diseases, discussing etiological factors, transmission, incubation, communicability, susceptibility, and resistance; laboratory diagnosis and clinical manifestations of the disease; the treatment of infected individuals, and factors which are associated with preventive measures.

This course consists of six assignments, evaluated at 18 points credit for purpose of Naval Reserve retirement and promotion. Applications for this course should be forwarded on form NavPers 992 (Rev 10/54 or later), with appropriate change in the "To" line, via official channels to the Commanding Officer, U. S. Naval Medical School, National Naval Medical Center, Bethesda 14, Maryland.

HOW DID IT START

From Supercargo to BuSandA

The present system of maintaining a constant flow of needed supplies to ships, shore and distant bases which was devised by the Bureau of Supplies and Accounts wasn't brought about overnight.

The Supply Corps had its origin in the British and American merchant marines of colonial times, when the purser, or "supercargo," directed the business operation of a ship as the representative of the vessel's owner. These men were business experts.

The first Navy pursers were given a military rank of warrant officer grade in 1794 and they became part of the complement of the four new 44-gun frigates.

On 23 Feb 1795, a Congressional act established a Purveyor of Public Supplies and instituted Navy procurement and supply ashore. With this act, the Navy's Supply Corps was born.

The Purveyor of Public Supplies, as the government's first purchasing agent, procured the supplies necessary to outfit the ships that sailed against the Barbary pirates. Supply functions ashore were administered by civilian Navy agents.

Through the years the Navy's supply system was modified and grew as the Fleet increased in size. A Bureau of Provisions and Clothing was formed in 1842. Fifty years later that name changed to the present title of Bureau of Supplies and Accounts.

The officers who administered the Navy's supply system were banded into the Supply Corps in 1919. In 1941 the group consisted of 2200 commissioned officers. So tremendous were the demands of supply, by the end of World War II the Supply Corps had mushroomed to 16,800 officers.

After the war an appraisal was made of the Navy's radically changed requirements. It was apparent that Navy supply would have to undergo a major change.

As a result of experience gained, detailed planning in BuSandA embodied many modern business principles and, in 1947, an integrated Navy Supply System was devised and the present system came into being.

Today a coordinated supply system based on "intelligence centers" covers all categories of equipment from a paper clip to high-octane fuel.

These "intelligence centers" are really inventory control offices that can locate any one of the 1.3 million items used by the Navy. Although these inventory control offices do not actually receive, warehouse and issue supplies, they do determine quantities to be bought of specific categories of material and direct the distribution of this material directly from manufacturers to Naval Supply Centers, Depots and other outlets. For example, the Aviation Supply Office at Philadelphia is responsible for controlling the inventory of all aviation material. Other items such as ordnance, medical, electronics or general supplies, fuel and printed forms and publications are controlled by similar inventory control offices.

But the storekeeper who needs a gizmo or gadget immediately can still go to the nearest Supply Center and requisition all his supplies, from radio tubes to pencils.

Requirements for Warrant Officers Selected for Promotion

SUCCESSFUL COMPLETION of written examinations or specified courses of instruction will be required of warrant officers on active duty selected for promotion in fiscal year 1959 (which begins 1 Jul 1958).

The new program, outlined in BuPers Inst. 1416.6, is designed to stimulate the professional growth of warrant officers.

The new program is very similar to the advancement program already in effect for other officers. Either examinations or several specified correspondence courses or schools must be completed if you are selected for promotion. The examinations and the courses will assure that a warrant officer is qualified in the executive and technical areas of his category.

In order to complete successfully the executive area of the examinations you must have a basic understanding of the principles and policies of the Department of Defense and the planning, control and administration of the Naval Establishment. Questions on the technical area will carry you into duties characteristically assigned to warrant officers of your category.

Examinations will require no more than five days to administer and will be based on the bibliography contained in an enclosure to the Instruction. However you can expect questions on equipment and methods too new to be covered by the bibliography material, but which have been introduced into operational use.

Examination exemptions may be gained by completing correspondence courses or resident courses of instruction or in some cases by preparing a formal paper.

The Navy will phase the professional requirements over a three-year period (fiscal years 1959-60-61). This is being done to avoid placing an undue load on warrant officers selected for promotion during the first years of the plan's effectiveness. During FY 1959 there are no requirements listed in the technical area. In 1960 a few will be added along with more subjects in the executive field and the total load will be applied in 1961.

For example, take a W-2 Boatswain (713) selected for promotion to W-3. In FY 1959 his examinations will contain questions selected from material found in the *Manual for Naval Instructors* (NavPers 16103B) and the *Manual for Courts-Martial U.S. 1951* and the *1955 Naval Supplement to the Manual for Courts-Martial.* If the warrant officer has completed the Education and Training, Part II (NavPers 10966) correspondence course and the *Military Justice in the Navy* (NavPers 10993) course, he will have gained exemption from examination.

If selected for advancement in 1960 a warrant officer in the same category would find in addition to the 1959 requirements, another added in the executive area and two in the technical area. He would find that his examination might also include material from *Education and Training* (NavPers 10827); *Shipboard Training Manual* (NavPers 90110); and *The United States Navy* (NavPers 92419). To obtain exemption from this portion of the examinations he would be required to take the Education and Training, Part I (NavPers 10965), correspondence course.

The technical area examination could include questions on practical damage control obtained from *BuShips Manual,* Chap. 88, Sec. II, and on cargo handling as described in *Cargo Handling,* NavPers 10124 and *Handling and Stowage of Cargo, 1949.*

Exemption from both examinations could be gained by taking the Practical Damage Control course (NavPers 10936) or attending the Officers' Basic Damage Control course (eight to 10 weeks), and by completing the Cargo Handling correspondence course (NavPers 10973).

In 1961 the same executive area subjects would apply and two additional requirements would be found in the technical area. Additional questions during that fiscal year will be found on shiphandling and radiological defense. The questions for the former will come from *Naval Shiphandling,* Naval Institute, 1955, and correspondence course exemption will be obtained by completing *Shiphandling* (NavPers 10738). *Radiological Defense,* Vol. II, and NWIP 50-1 will be the basis for questions in the latter area, and exemption requirements are completion of *Radiological Defense* (NavPers 10771) or attendance at the ABCD five-week course alone or combined with Damage Control course at Philadelphia or Treasure Island.

This example of what a W-2 Boatswain will be examined on, is given here to acquaint you in general with the nature of the professional fitness program.

Senior petty officers who hope to make warrant officer in the future should find it profitable to study the instruction. Courses taken while in the E-6 and -7 pay grades will serve as promotion exemptions in the warrant officer grades.

"— ! . . . . Boo!"

List of Motion Pictures Scheduled for Distribution To Ships and Bases Overseas

The latest list of 16-mm. feature movies available from the Navy Motion Picture Service, Bldg. 311, Naval Base, Brooklyn 1, N. Y., is published here for the convenience of ships and overseas bases. The title of each picture is followed by the program number.

Those in color are designated by (C) and those in wide-screen processes by (WS). Distributions began in August.

These films are leased from the movie industry and distributed free to ships and most overseas activities under the Fleet Motion Picture Plan.

Battle Hymn (859) (C) (WS): Drama; Rock Hudson, Martha Hyer.

Last of the Badmen (860) (C) (WS): Drama; George Montgomery, Meg Randall.

The Ride Back (861): Drama; Anthony Quinn, Bill Conard.

Abandon Ship (862): Drama; Tyrone Power, Mai Zetterling.

Full of Life (863): Comedy; Judy Holliday, Richard Conte.

Anastasia (864) (C) (WS): Drama; Ingrid Bergman, Yul Brynner.

Kelly and Me (865) (C) (WS): Drama; Van Johnson, Piper Laurie.

The Burglar (866): Crime Drama; Dan Duryea, Jayne Mansfield.

The Girl in the Kremlin (867): Drama; Lex Barker, Zsa Zsa Gabor.

The Kettles on Old MacDonald's Farm (868): Comedy; Marjorie Main, Parker Fennelly.

Hot Rod Rumble (869): Drama; Leigh Snowden, Richard Hartunian.

War Drums (870) (C): Western; Lex Barker, Joan Taylor.

Gun Duel at Durango (8713: Western; George Montgomery, Ann Robinson.

The Iron Sheriff (872): Western; Sterling Hayden, Darryl Hickman.

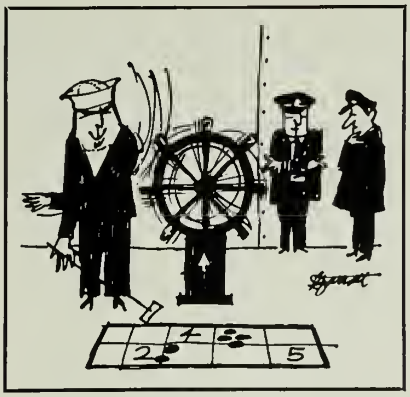
Dino (873): Drama; Sal Mineo, Brian Keith.

Designing Woman (874) (C) (WS): Drama; Gregory Peck, Lauren Bacall.

The Barretts of Wimpole Street (875) (C) (WS): Drama; Jennifer Jones, Sir John Gielgud.

The Badge of Marshall Brennan (876): Western; Jim Davis, Carl Smith.

Daughter of Dr. Jekyll (877): Horror; John Agar, Gloria Talbott.



"Coznowski does have a good business head on him."

The Delicate Delinquent (878): Comedy; Jerry Lewis, Darren McGavin.

The She-Devil (879): Drama; Mari Blanchard, Jack Kelly.

Gunfight at the OK Corral (880) (C): Drama; Burt Lancaster, Kirk Douglas.

Man on Fire (881): Drama; Bing Crosby, Inge Stevens.

Monster That Challenged the World (882): Drama; Tim Holt, Audrey Dalton.

The Strange One (883): Drama; Ben Gazzara, James Olson.

New Course on Methods and Procedures in Blood Transfusions

The Medical Department correspondence course, *Special Clinical Services, Blood,* (NavPers 10998) has been revised and reissued under the title, **Blood Transfusion, Methods and Procedures,** (NavPers 10998-1) for enrollment by Regular and Reserve officers and enlisted personnel of the Medical Department. The course covers collection and storage of blood, the preparation of plasma, laboratory procedures including blood grouping and crossmatching, and the administration of blood and blood substitutes.

This course consists of eight assignments, evaluated at 24 points credit for purposes of Naval Reserve retirement and promotion.

Applications for this course should be made on form NavPers 992 (Rev. 10/54 or later), with appropriate change in the "To" line, forwarded via official channels to the Commanding Officer, U.S. Naval Medical School, National Naval Medical Center, Bethesda 14, Md.

Just a Reminder — Opportunity Knocks for NROTC

If qualified, you again may participate in the nation-wide Navy College Aptitude Test for entry as midshipman into the Naval Reserve Officer Training Corps Program (see the September issue of All Hands, page 48).

Tests will be conducted 14 December, and *all nominations should reach the Chief of Naval Personnel by 16 October for the 1958 class.*

Approximately 2000 appointments will be made in this year's program, 200 of which are offered Navy and Marine Corps men on active duty; other appointments are from civilian applicants. You will be appointed midshipman in the Naval Reserve and will receive a commission as ensign in the Navy or second lieutenant in the Marine Corps upon successful completion of the four-year college course.

The Navy will provide your tuition, textbooks, laboratory expenses and required uniforms. You will receive retainer pay of $600 a year to assist in paying the cost of quarters and subsistence while attending the NROTC university of your choice.

You may pursue any course leading to a baccalaureate or higher degree with the exception of medicine, dentistry, veterinary, theology, pharmacy, music and art. You will be required to include in your course 24 semester hours or the equivalent quarter hours of Naval Science and must complete mathematics through trigonometry and one year of physics by the end of your sophomore year. You will also be required to participate in two summer cruises and one summer period each of amphibious and aviation indoctrination.

You must be between your 17th and 21st birthdays as of 1 Jul 1958, unmarried, physically qualified and a high school graduate or possess an equivalent certificate.

If qualified, you may apply to your commanding officer for nomination to take the Navy College Aptitude Test. The names of successful candidates will be published in February 1958 in a joint Bureau of Naval Personnel-Marine Corps Directive.

Detailed instructions may be found in BuPers Inst. 1111.4B.

Sailors May Be in the Dark and on Ice, But Exams Go On

When Navymen the world over sat down in August to take the Fleet-wide advancement examinations, they were joined by approximately 100 men living in total darkness at the "bottom of the world."

These Bluejackets are members of the Operation Deep Freeze II wintering-in party. The Navy made every effort to insure that any member of the 210-man party who became eligible for the tests would have an opportunity to take it. Their needs for exams were determined last year and the tests were either taken down with the party or traveled in the first mail.

After the tests were taken, they were scored by the commanding officers of the various stations and the results radioed to the Navy Examining Center, Great Lakes, Ill. Officials there will supply the names of those to be advanced to the Antarctic party by radio.

The men "down under" face many obstacles in their efforts to advance. Those who prepared for the February tests had little time for study. Winter was fast approaching with its days of 24-hour blackness and the schedule was crowded with work as construction jobs were rushed to completion and stores were brought ashore from Task Force 43 ships. When test day did roll around only a few hours could be set aside for the examination sessions.

One group took the tests on the bleak plains of Antarctica, several hundred miles from their base camp. They were in a tractor train moving along the frozen trail to Byrd Station. The exams were airlifted to the train which stopped its forward motion long enough to complete the tests and then the trek through the wilderness resumed.

Other groups faced long working hours unloading supplies from the ships. This work went on around the clock with Navymen working 12 on—12 off shifts. Little time was left for the exhausted men to prepare for the examination as they worked to get the Task Force started home before the hull-crushing ice blocked the way.

However, the Deep Freeze II party scored very favorable results. Of the 15 men at the Knox Coast Station, nine took the test and five were rated. Their test results failed to make the last mail so the answers to questions were radioed out to the Examining Center where they were graded and the results returned by dispatch.

At Little America V, 18 men were advanced one pay grade and in the entire party, nine were selected for advancement to CPO as a result of the February test.

Plans have already been made in the Bureau of Naval Personnel for administering the tests to Operation Deep Freeze III personnel. Tests and answer keys will be taken to the Polar Continent by the wintering-in party. The February test will not be given until March when unloading operations will have been completed and time will be available for studying. Radio will again be used to transmit scores and advancement information.

DIRECTIVES IN BRIEF

This listing is intended to serve only for general information and as an index of current Alnavs and NavActs as well as current BuPers Instructions, BuPers Notices, and SecNav Instructions that apply to most ships and stations. Many instructions and notices are not of general interest and hence will not be carried in this section. Since BuPers Notices are arranged according to their group number and have no consecutive number within the group, their date of issue is included also for identification purposes. Personnel interested in specific directives should consult Alnavs, NavActs, Instructions and Notices for complete details before taking action.

"Happy Birthday, dear Bradshaw, Happy Birthday to you!"

Alnavs apply to all Navy and Marine Corps commands; NavActs apply to all Navy commands; BuPers Instructions and Notices apply to all ships and stations.

Alnavs

No. 31—Announced approval by the President of the report of a selection board which recommended Regular and Reserve Marine Corps officers for temporary promotion to the grade of colonel.

No. 32—Announced approval by the President of the reports of selection boards which recommended USN Medical Corps and Supply Corps officers for temporary promotion to grade of rear admiral.

No. 33—Announced approval by the President of the report of a selection board which recommended Regular and Reserve Marine Corps officers for temporary promotion to the grade of lieutenant colonel.

No. 34—Announced approval by the President of the report of a selection board which recommended USN and USNR officers for temporary promotion to the grade of captain.

No. 35—Announced approval by the Secretary of the Navy of the report of a selection board which recommended USN warrant officers to the permanent grades of chief warrant officer, W-4, W-3, W-2 and to the temporary grade of chief warrant officer W-3.

Instructions

No. 1133.3C — Emphasizes the need for reenlistment of qualified Navy enlisted personnel and outlines an effective reenlistment pro-

QUIZ AWEIGH ANSWERS

QUIZ AWEIGH IS ON PAGE 47

1. (c) Can buoys.
2. (b) Black.
3. (a) Starboard.
4. (b) Quarantine.
5. (a) Not less than 60 times per min.
6. (c) No preferred channel.

gram for use by commands.

No. 1520.4C—Invites applications from men who are USN or USNR unrestricted line or limited duty officers (except those in the aviation classifications) for deep-sea diving training.

No. 1920.8—Outlines the procedure for appointment of commissioned or warrant officers resigning from the Regular Navy to commissioned or warrant grade in the Naval Reserve.

Notices

No. 1088 (24 July)—Informed naval activities of certain changes in procedure to be used in connection with notification to next-of-kin concerning casualties.

No. 1520 (6 August)—Announced Change No. 1 to BuPers Inst. 1520.6G, which is concerned with applications for officer submarine training.

No. 1111 (8 August)—Provided information concerning the NROTC program.

No. 1410 (15 August)—Described modifications of qualifications required for advancement in rating to be used in the February 1958 service-wide examinations for Air Controlman.

No. 1120 (20 August)—Announced changes to the obligated service requirements for graduates of flight training programs.

No. 4650 (21 August)—Advised naval personnel traveling to or from an overseas area to arrange for transportation well in advance whether traveling unaccompanied or accompanied by their dependents.

New Time Requirements For Flight Trainee Grads

Beginning 1 Jan 1958, active duty officers and aviation officer candidates who enter flight training programs will be required to execute an agreement to serve for a period of three and one-half years instead of the present two years after completion of training.

This ruling will not affect Naval Aviation Cadets, who will continue to serve for a total period of not more than four years until such time as a statute, which controls their obligated service, is changed.

More information on the change in obligated time requirements is in BuPers Notice 1120 of 20 August.

New Correspondence Courses Now Ready for EMs

Seven new Enlisted Correspondence Courses are now available. One course has been discontinued.

Enlisted Correspondence Courses will be administered (with certain exceptions) by your local command instead of by the Correspondence Course Center.

If you are on active duty, your division officer will advise you whether the course for which you have applied is suitable to your rate and to the training program you are following. If it is, he will see that your application (NavPers 231) is forwarded to the Correspondence Course Center, which will supply the course materials to your command for administration.

Personnel on inactive duty will have courses administered by the Center. The new courses are:

Course	NavPers No.
*Machinery Repairman 3	91506-1
Fire Control Technician 1, Volume 3	91345
Molder 1	91555
Lithographer 3, Volume 2	91470
*Parachute Rigger 3, Volume 1	91640-1
*Personnel Man 1	91421-1
*Personnel Man Chief	91422-1

*May be retaken for repeat Naval Reserve Credit.

Fire Controlman 1, Volume 1 (NavPers 91321) has been discontinued.

WHAT'S IN A NAME

Red Snapper Snoopers

"Hands behind your back.—Take a deep breath.—Hold it.—That's all.—Next."

Chances are, you've heard those words before. They're the battle cry of the "Red Snapper Snoopers"—the doctors and corpsmen helping the Navy to fight tuberculosis as members of chest X-ray units.

The "red snapper" is *Mycobacterium tuberculosis*, the germ which causes TB. It gets its nickname from its ability to pick up and hold a red dye when it is stained for identification purposes. Usually, it gets around through the droplets spread into the air by an infected person's coughing or breathing.

The "Snoopers" are in business to detect the disease in its early stages, when TB is easier to treat and less likely to be transmitted to other persons. To do this, they make chest X-rays of all Navy and Marine Corps personnel when they enter or leave the service and at yearly intervals whenever possible. They also X-ray Navy and Marine Corps civilian employees and the dependents of Navymen and Marines.

Last year the Snoopers X-rayed 1,453,345 persons. Of these, 1,613 were studied further for possible tuberculosis. And, since the X-rays are also checked for other abnormalities, 2,113 other chest conditions were also detected.

More than likely, you were one of the people who had his picture taken last year by a Navy X-ray unit. If so, you may want to know what became of that photo of your innermost self:

First, it was developed by the corpsmen attached to the unit and studied by the unit's doctor. If it was normal, a report of it was filed in your health jacket. If there were suspicious findings, or if the film wasn't good enough to be read accurately, you would have been called back for another X-ray, the report of which would also have been filed in your jacket. The survey X-rays and reports were forwarded to the Bureau of Medicine and Surgery in Washington, D. C., where doctors studied them a second time to make sure nothing was overlooked in the first reading. Then, your X-ray was filed away where it can be referred to in the future if needed.

Besides the X-ray, another important weapon in the Navy's fight against TB is the skin test, which shows whether or not you have been exposed to the disease. Nowadays everyone in the Navy gets one of these tests along with a chest X-ray, the day he enters the service. This is to make sure he isn't bringing active tuberculosis in with him.

And, thanks to the Red Snapper Snoopers, he probably won't have it when he leaves the service either.

Roundup on Sources of Information for the Career Navyman

NAVAL directives are of necessity constantly changing and many of the changes that are made affect your Navy career in some way. Although the information concerning your service advantages, opportunities and benefits appear in manuals, regulations, or notices, you may have difficulty in locating them because of frequent changes or unintentional oversight.

Here's a list of up-to-date directives dealing with career opportunities and programs available to officers and enlisted men classified according to subject matter. It supersedes the list presented in February 1957 ALL HANDS pp. 55-57.

ADVANCEMENT OR CHANGE IN RATE OR RATING

Subject	Pertinent Directive or Authority
General Programs	
Advancement:	
Policy:	BuPers Inst. 1430.7B *BuPers Manual* (Pt. C, Chap. 7, Sec. 2)
Qualifications:	*Manual of Qualifications for Advancement in Rating* (NavPers 18068)
Eligibility:	BuPers Inst. 1414.3A
Naval Reserve	BuPers Inst. 1430.1B
Service-wide Competitive Examinations for Advancement to Pay Grades E-4, E-5, E-6, and E-7; policy, eligibility	BuPers Inst. 1418.7C
Changes in Rate, Rating, and Rate Symbols; policy	BuPers Inst. 1440.5B
Future Input to GS, GF and AQ Rating; policy	BuPers Inst. 1440.14A
Program for Adjustment of the Enlisted Rating Structure through Formal School Training and Through In-Service Training; establishment of	BuPers Inst. 1440.18

APPOINTMENT TO COMMISSIONED GRADE

NAVAL ACADEMY, FLIGHT TRAINING, OCS

Subject	Pertinent Directive or Authority
Naval Preparatory School	Art. C-1203, Bu-Pers *Manual*,
Aviation Cadet Training Program eligibility; procedures for applying	BuPers Inst. 1120.20A
Officer Candidate School; policy, eligibility	BuPers Inst. 1120.11A

SPECIAL PROGRAMS

Subject	Pertinent Directive or Authority
Appointment to Commissioned Grade, Integration and LDO, Programs, Appointment to Warrant Grade; information concerning	BuPers Inst. 1120.18B
Selection of Qualified Members of the Naval Service for Aviation Officer Candidate Training and Appointment to Commissioned Grade in the line; policy, eligibility	BuPers Inst. 1120.25
Regular Navy Augmentation Program; policy, eligibility	BuPers Inst. 1120.12E
Appointment to Commissioned Grade, SDO (LAW), 1620; policy, eligibility	BuPers Inst. 1120.21
Appointment to Commissioned Grade, Optometry, Pharmacy, and Medical Allied Sciences Sections of the Medical Corps, Regular Navy; policy, eligibility	BuPers Inst. 1120.8A
Appointment to Commissioned Grade in Administration and Supply Sections, Medical Service Corps, Regular Navy; policy, eligibility	BuPers Inst. 1120.15B
Appointment to Commissioned Grade in Administration and Supply Sections, Medical Service Corps Reserve, U. S. Naval Reserve; policy, eligibility	BuPers Inst. 1120.10A
Nomination of Qualified Enlisted Personnel for the NROTC Program; policy, eligibility	BuPers Inst. 1111.4B
Appointment to Commissioned Grade of Enlisted Women in the U. S. Naval Reserve; policy, eligibility	BuPers Inst. 1120.9A
Appointment in the Field of Sciences of Personnel in the Medical Service Corps, Naval Reserve; policy, eligibility	BuPers Inst. 1120.24
Law Specialist Program for USNR officers; eligibility, procedure for applying	BuPers 1120.28

TRAINING

GENERAL TRAINING

Subject	Pertinent Directive or Authority
Enlisted Training Schools and Courses; policy, quotas, eligibility for enrollment	BuPers Inst. 1500.25B, *Catalog of U. S. Navy Training Activities and Courses* (NavPers 91769-B)
Information and Education Program; policy	Art. D-2103, *BuPers Manual, Information and Education Manual* (NavPers 16963-C)
Enlisted Correspondence Course Program	*Catalog of Enlisted Correspondence Courses* (NavPers 91200-A)
Navy Enlisted Advance School Program; information concerning	BuPers Inst. 1510.69A
Study materials for Applicants for Appointment to Commissioned Status under Integration, LDO, WO (W-1) Programs.	BuPers Inst. 1560.12

SPECIALIZED TRAINING

Subject	Pertinent Directive or Authority
Naval Air Mobile Trainer Program; policy, eligibility	BuPers Inst. 1306.31A
U. S. Naval School of Music; applications for courses	BuPers Inst. 1336.2B
Assignment of Enlisted Personnel to the Nuclear Power Training Program; policy, eligibility	BuPers Inst. 1306.53A SecNav Inst. 1000.3
Tuition Aid Program; resumption of	BuPers Inst. 1560.10

REENLISTMENT

Subject	Pertinent Directive or Authority
Reenlistment and Voluntary Extension of Enlistment of Regular and Reserve Personnel on Active Duty; procedure	BuPers Inst. 1133.1C BuPers Inst. 1133.10
Reenlistment in the Regular Navy or Voluntary Retention on Active Duty of Inducted Personnel; policy, eligibility	BuPers Inst. 1133.8
Discharge up to One Year in Advance of Normal Expiration of Enlistment Date in order to Reenlist; policy, eligibility	BuPers Inst. 1133.4

Subject	Pertinent Directive or Authority
Reenlistment in the Regular Navy of Naval Reserve Personnel Serving on Active Duty; policy, eligibility	BuPers Inst. 1130.4C
Assignment to a School as an Incentive for Reenlistment; policy, eligibility	BuPers Inst. 1133.5

SPECIAL DUTY AND ASSIGNMENT

General Policy

Training and Administration of the Naval Reserve; duty in; policy, eligibility	BuPers Inst. 1001.7A
Retention on Active Duty and Recall of Enlisted Naval Reserve and Fleet Reserve, information concerning	BuPers Inst. 1001.21
Assignment and Rotation of Enlisted Women; policy	BuPers Inst. 1306.10B

Special Assignments

Transfer and Assignment for Humanitarian or Hardship Reasons; policy, eligibility	BuPers Inst. 1306.24A
Assignment to Duty of Sole Remaining Sons; policy	BuPers Inst. 1300.11
Assignment to Naval Missions, Attaches, Military Aid Groups, Joint Staffs, SHAPE; policy, eligibility	BuPers Inst. 1306.6B
Assignment to Recruiting Duty; policy, eligibility	Art. C-5208, BuPers Manual, BuPers Inst. 1336.1A
Assignment to Duty as Instructors; policy, eligibility	BuPers Inst. 1306.22B, BuPers Inst. 1306.42 (applies to musicians only)
Assignment with Naval Security Group Activities; policy, eligibility	BuPers Inst. 1306.23C
Assignment of Enlisted Personnel to Initial Submarine Training and Duty; policy eligibility	BuPers Inst. 1540.2C
Assignment to Reserve Training Submarines; policy, eligibility	BuPers Inst. 1306.38
Assignment to Duty Involving Demolition of Explosives; policy, eligibility	BuPers Inst. 1320.5A

PAY, ALLOWANCES, INSURANCE

Soldiers' and Sailors' Civil Relief Act of 1940; summary of benefits under	BuPers Inst. 1760.4
Uniform Services Contingency Option Act; options under	BuPers Inst. 1750.1B
Social Security Benefits for Military Service; summary of benefits under	BuPers Inst. 1741.10
Obtaining and Recording Social Security Account Number Cards for active duty members of the Armed Forces; procedures	BuPers Inst. 1741.8
Mortgage Insurance for Servicemen to Aid in the Construction or Purchase of Homes; policy, eligibility	SecNav Inst. 1741.4

SEPARATION AND RETIREMENT

Review of Undesirable and Punitive Discharges; information concerning	BuPers Inst. 1626.16
Early Separation of Certain Enlisted Personnel Serving on Active Duty; information concerning	BuPers Inst. 1910.11A
Early Separation of Enlisted Personnel to Attend College; information concerning	BuPers Inst. 1910.12A
Retirement, Voluntary and Naval Reserve, With or Without Pay; policy, eligibility	BuPers Inst. 1820.1A, BuPers Inst. 1820.2, SecNav Inst. 1811.3A

Subject	Pertinent Directive or Authority

MISCELLANEOUS

GENERAL INTEREST

Navy Relief Society, services by	Art. C-9207, BuPers Manual, BuPers Inst. 1747.1A
American Red Cross, services by	Art. C-9207, Art. C-10308(7) BuPers Manual
Voting by Members of the Armed Forces; policy	BuPers Inst. 1742.2A
Immigration and Nationality Act of 1952; alien spouses, naval personnel, information	SecNav Inst. 1750.1
VA Hospitals; transfer of naval active and retired personnel to; policy	BuMed Inst. 6320.11
Marriage of USN and USMC Personnel Outside the United States and Within Far East Command; policy	Art. C-11109, BuPers Manual, SecNav Inst. 1752.2A
Visas for Alien Wives and Children of Naval Personnel; information concerning	SecNav Inst. 1750.2
Participation of Enlisted Personnel in Inter-Service and International Athletic Events and Competitions; policy, eligibility	BuPers Inst. 1710.1D BuPers Inst. 1710.2
Transportation of Dependents; policy	BuPers Inst. 4650.6A, BuPers Inst. 4650.8A
Summary of State Bonuses	BuPers Inst. 1760.3B

PROGRAMS AND OPPORTUNITIES OF PARTICULAR INTEREST TO OFFICERS

TRAINING

GENERAL TRAINING

Schools and Courses	*Catalog of U. S. Navy Activities and Courses* (NavPers 91769-B), BuPers Inst. 1500.25B
General Line School; policy, eligibility	BuPers Inst. 1520.43
Postgraduate Instruction; policy, eligibility	BuPers Inst. 1520.15C
Five-Term College Training Program; policy, eligibility	BuPers Inst. 1520.48A, BuPers Inst. 1520.37
Completion of Naval Aviation College Program for USN Officers; policy, eligibility	BuPers Inst. 1520.28
Officer Correspondence Courses; summary	*Catalog of Officer Correspondence Courses* (NavPers 10800-A)
Tuition Aid Program; resumption of	BuPers Inst. 1560.10

SPECIALIZED TRAINING

Flight Training (HTA); policy, eligibility	BuPers Inst. 1520.20A
Underwater Demolition Training; policy, eligibility	BuPers Inst. 1520.7
Deep Sea Diving Training; policy, eligibility	BuPers Inst. 1520.4B
Training and Administration of the Naval Reserve; policy	BuPers Inst. 1001.10A
Nuclear Power Training Program; information concerning	BuPers Inst. 1540.33
Assignment of Officers of Nuclear Powered Submarines	BuPers Inst. 1301.28

ASSIGNMENT TO SPECIAL DUTY

Assignment to Submarine Duty; policy, eligibility	BuPers Inst. 1520.6G
Assignment to Special Weapons Program; policy, eligibility	BuPers Inst. 1331.1A
Assignment with a Navy Security Group; policy, eligibility	BuPers Inst. 1331.2B

Subject	Pertinent Directive or Authority
Assignment to Duty Involving Demolition of Explosives; policy, eligibility	BuPers Inst. 1320.5A
Assignment to Nuclear Power Program; policy, eligibility	SecNav Inst. 1000.3
Assignment to Duty with Joint, Combined Allied and Office of Secretary of Defense Staffs	BuPers Inst. 1611.10
APPOINTMENT	
Appointment to Ensign, Integration and LDO Program; policy, eligibility	BuPers Inst. 1120.18D
Appointment of Naval Reserve Aviators to Commissioned Grades in Regular Navy; policy, eligibility	BuPers Inst. 1120.14A
Appointment in the Medical Corps and Dental Corps, Regular Navy; policy, eligibility	BuPers Inst. 1120.3E
MISCELLANEOUS	
Uniform Allowances for Naval Reserve Officers; entitlement and reimbursement for	BuPers Inst. 7220.14A
Naval Reserve Officers not on Active Duty; regulations and procedures governing screening the Ready Reserve and assignment to, transfer between, and discharge from Reserve categories; policy	BuPers Inst. 1821.1A
Non-disability Retirement of Officers and Warrant Officers; information concerning	BuPers Inst. 1811.1

PAMPHLETS AVAILABLE

Overseas Transportation Information for Navy Dependents (NavPers 15842). May be obtained from your shipping officer.

Household Goods Shipment Information (NavSandA 260). May be obtained from your shipping officer.

Protecting Your Family (NavPers 15899). Reviews the outstanding features of the Survivor Benefits Act and the Medicare Act.

Rights of Servicemen and Veterans under the Social Security Law (as amended in 1956) (OASI 1956-3). May be obtained from Department of Health, Education and Welfare.

Social Security Benefits. Survivor, retirement benefits for members of the armed forces (DOD Pamphlet 8-3).

Medical Care for Service Dependents. (DOD Pamphlet 6-4) (NavExos P-1602).

Going Back to Civilian Life (NavPers 15855C).

Rights and Benefits of Navymen and Dependents (NavPers 15885A).

Federal Benefits Available to Veterans and Their Dependents (VA Fact Sheet IS-1, Oct 1956). May be obtained from the Veterans Administration.

Navy Guide for Retired and Fleet Reserve Personnel (NavPers 15891).

NOTE: Unless otherwise stated, these pamphlets may be obtained from the I & E officer of your local command.

Vanguard Computing Center Will Calculate Movements of Earth Satellites

An electronic computer, as complicated and intricate as it is fascinating, has been set up in Washington, D. C., for the Vanguard Project.

It will have a job to do that will be as difficult as locating a golf ball traveling at the speed of sound at a 60,000-foot altitude. Naturally, the device was not designed to track golf balls—its high speed electronic calculations will predict future orbits of U.S. scientific satellites.

The center will be operated under a Navy contract with a business machine corporation.

Initial U. S. satellites, planned for launching under Project Vanguard, will be 20 inches in diameter and will speed at more than 18,000 mph in an elliptical course at altitudes of from 250 to 1500 miles above the earth.

The machine's computing units are rigged to whip out complicated calculations fast enough to anticipate the path of the tiny artificial satellite hurtling around the world every 100 minutes. The computer is magnetic tape-operated. Not only is tape used for data storage, but it is also the primary means of input and output to and from the heart of the computer. It has to be fast since information flows in and out of a central unit via tape at the rate of 2500 words per second. As many as three tapes can be read at once.

Initial acquisition and later tracking of the man-made moon by radio technicians will be assigned to a "Minitrack" system, developed by the Naval Research Laboratory.

A submarine radio transmitter, with battery power enough to operate for several weeks, will be installed in the satellite to reach antennas of ground tracking systems. These Minitrack stations will be the satellite's radio link with the earth.

There will be nine of these Minitrack stations manned by U. S. Navy, Army, Air Force and civilian technicians. The stations will be located at Blossom Point, Md.; Ft. Steward, Ga.; Batista Field, Havana, Cuba; Coolidge Field, Antigua, B.W.I.; Mt. Cotapaxi, Quito, Ecuador; Ancon, Lima, Peru; Antofagasta, Chile; Peldehue Military Reservation, Santiago, Chile; and the Navy Electronics Laboratory, San Diego, Calif. Another Minitrack station at Woomera, Australia, will be operated by Australian technicians.

As the satellite crosses the area of a station, Minitrack equipment will measure its angular positon by phase comparison techniques, recording its "signature" automatically. Analysis of these signatures will give the complete angular history of the satellite's passage. The data will be flashed to a Vanguard control center at the Naval Research Laboratory. Here it will be relayed to the Vanguard Computing Center for the complicated job of calculating and compiling satellite ephemerides (timetables of the expected locations of the satellite at regular intervals during its future life).

These schedules, signaled to optical tracking stations around the world, will tell watchers when and where to train their instruments for precise observation of the tiny, speeding, artificial moon.

Vanguard is one of the most ambitious projects ever to be undertaken. It is an attempt to probe the fringe of outer space, so necessary before man himself can take the big jump. Many problems must be answered before this first satellite can be launched. The electronic computor equipment and Minitrack are steps in this direction.

DECORATIONS & CITATIONS

DISTINGUISHED SERVICE MEDAL

"For exceptionally meritorious service to the Government of the United States in a duty of great responsibility . . ."

★ Dufek, George J., RADM, USN (Ret.), as Commander United States Naval Support Force, Antarctica, during Operations Deep Freeze I and II from 1 Feb 1955 to 22 Mar 1957. Admiral Dufek was directly responsible for the preparation of plans and operations of Deep Freeze I and II which led to the establishment of seven widely dispersed bases to support the Antarctic programs of the U. S. National Committee for the International Geophysical Year.

LEGION OF MERIT

"For exceptionally meritorious conduct in the performance of outstanding service to the Government of the United States . . ."

★Wilkinson, Eugene P., CAPT, USN, for exceptionally meritorious conduct as commanding officer of the USS *Nautilus*, SS (N)—571, the world's first nuclear-powered submarine. While under his command (from 30 Sep 1954 to 18 Jun 1957) *Nautilus* steamed more than 67,000 miles without a major breakdown or failure to meet an operational commitment. CAPT Wilkinson's leadership significantly contributed to the advancement of anti-submarine warfare through imaginative operations with naval surface and air forces. He also directed a public relations program which has greatly benefited the Navy and the U. S. government.

DISTINGUISHED FLYING CROSS

"For heroism or extraordinary achievement in aerial flight . . ."

★ Anderson, Robert L., LCDR, USNR, awarded posthumously for heroism and extraordinary achievement in aerial flight as pilot of a jet aircraft, attached to and serving with Air Transport Squadron Thirty-Two, during a routine flight on 1 Aug 1956. When his aircraft caught fire immediately after taking off from the El Paso, Texas, International Airport, Lieutenant Commander Anderson skillfully avoided a densely populated housing area and school building. He crashed-landed his flaming aircraft in an open and deserted field, sacrificing his own life in order to save the lives of others.

★ Barber, Donald W., AT2, USN, for heroism while participating in aerial flight on 23 Aug 1956.

★ Caron, Warren E., AO2, USN, for heroism while participating in aerial flight on 23 Aug 1956.

★ Cox, Dale W., Jr., CDR, USN, as pilot of an A3D *Skywarrior,* established the U. S. transcontinental (East to West) aerial speed record of five hours, 12 minutes, 39.24 seconds, and the round trip record of nine hours, 31 minutes, 34.4 seconds, on 21 Mar 1957.

★ Curtis, Jack A., AT3, USN, awarded posthumously for heroism while participating in aerial flight on 23 Aug 1956.

★ Deane, James B., Jr., LTJG, USN, for heroism while participating in aerial flight on 23 Aug 1956.

★ Flood, Francis A., Jr., LTJG, USN, for heroism while participating in aerial flight on 23 Aug 1956.

★ Haskins, William F., AT1, USN, awarded posthumously for heroism while participating in aerial flight on 23 Aug 1956.

★ Humbert, William M., Jr., AO3, USN, for heroism while participating in aerial flight on 23 Aug 1956.

★ Hutchinson, Milton, LCDR, USNR, for heroism while participating in aerial flight on 23 Aug 1956.

★ Lounsbury, Harold E., AD1, USN, for heroism while participating in aerial flight on 23 Aug 1956.

★ Mattin, Albert P., AT1, USN, awarded posthumously for heroism while participating in aerial flight on 23 Aug 1956.

★ Messinger, Carl E., AT2, USN, for heroism while participating in aerial flight on 23 Aug 1956.

★ Ponsford, James W., LCDR, USN, awarded posthumously for heroism while participating in aerial flight on 23 Aug 1956.

★ Powell, Wallace W., AE2, USN, for heroism while participating in aerial flight on 23 Aug 1956.

★ Sprinkle, Donald E., AT3, USN, for heroism while participating in aerial flight on 23 Aug 1956.

★ Strykowsky, Leonard, AT2, USN, for heroism while participating in aerial flight on 23 Aug 1956.

NAVY AND MARINE CORPS MEDAL

"For heroic conduct not involving actual conflict with an enemy . . ."

★ Berry, Donald E., DN, USN, for heroic conduct in rescuing a servicewoman from drowning in waters off Hunting Island State Park, South Carolina, on the afternoon of 2 Sep 1956.

★Boulet, Leland F., SN, USNR, for heroic conduct in rescuing a shipmate from drowning, while serving on board USS *Floyd B. Parks* (DD 884) in the Philippine Sea, on 11 Mar 1956.

★ Davis, Albert Joseph, AD3, USN, for heroic conduct in assisting in the rescue of a drowning shipmate, while serving on board the USS *Langley* (CV 1) in Guantanamo Bay, Cuba, on 5 Apr 1931.

★ Dietlin, Robert, SN, USN, for heroism in rescuing a fifteen-year old boy from drowning at Sandy Beach, Koko Head, Oahu, Hawaii, on the afternoon of 28 Oct 1956.

★ Dunn, Francis C., BM2, USN, awarded posthumously for heroic conduct while serving on board the USS *Rolette* (AKA 99) at the Mare Island Shipyard, Vallejo, Calif., on 20 Apr 1956.

★ Franklin, Charles H., SN, USN, for heroism in rescuing a fifteen-year old boy from drowning at Sandy Beach, Koko Head, Oahu, Hawaii, on the afternoon of 28 Oct 1956.

★ Kiel, Max R., CD2, USN, awarded posthumously for heroic conduct while serving with United States Construction Battalion (Special) in the Antarctic from 29 Dec 1955 to 5 Mar 1956.

★ Lawrence, Kenneth W., LT, USN, for heroic conduct while serving as Crash and Fire Officer, United States Naval Auxiliary Air Station, Kingsville, Texas, on 16 May 1956.

★ Morrow, Teddy J., SN, USN, for heroism in rescuing a fifteen-year-old boy from drowning at Sandy Beach, Koko Head, Oahu, Hawaii, on the afternoon of 28 Oct 1956.

★ Spector, Abraham, AD3, USN, awarded posthumously for heroic conduct while attached to Helicopter Utility Squadron TWO, temporarily based aboard USS *Franklin D. Roosevelt* (CVA 42) in attempting to rescue a ditched fighter pilot on 6 Apr 1957.

BOOKS

THIS MONTH'S SELECTIONS RANGE FROM EAST TO WEST

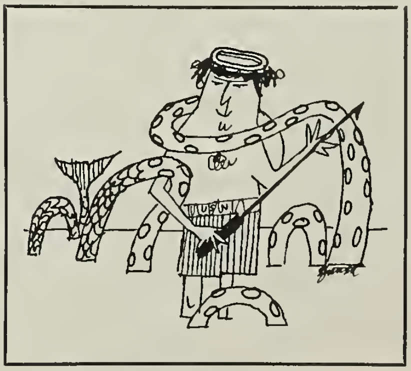
Whether you like to read about the Civil War or the Korean conflict, UDT type operations or earth satellites, you have your choice in this month's selections. Here are short accounts of some of the many books available to you at your ship or station library.

Sea stories of the "now it can be told" variety abound in ***The Sea War in Korea*** by CDR Malcolm W. Cagle, USN, and CDR Frank A. Manson USN. Here, for the first time, are the facts behind such hush-hush incidents as the air battle between Navy and enemy jets over Vladivostok and the behind-the-lines intelligence missions which made the Inchon success possible. *Sea War in Korea* will become a "must" for students of military and international affairs, not so much for its value as a history, but for its value as an interpretation of the results and of the lessons learned in the action. Much of the material was compiled from interviews with every major military commander of the conflict including Generals MacArthur and Van Fleet and Admirals Joy, Burke, Briscoe and others. Commanders Cagle and Manson have managed to weave in excerpts portraying individuals at war which adds the sympathetic twist to an already exciting narrative.

Much has been said and written about man's first attempt to launch an earth satellite. Martin Caidin's ***Vanguard*** covers the whole story of *Project Vanguard,* the attempt by the United States to send an artificial moon to orbit around the earth. This highly technical and scientific subject doesn't leave you up in the air for a minute. It is written in a manner which leaves the layman with a clear understanding of the background research, of the construction of the satellite and its three-stage-rocket launching system, and of the knowledge which, it is hoped, will be gained from this experiment. All the reader's questions are anticipated and answered with the latest official information.

Dropping from the ethereal to the liquid medium, Major Willy-Charles Brou takes us under the surface of the ocean with his ***Combat Beneath the Sea.*** This is the story of the development and usage, by various combatants during WW II, of human torpedoes, midget submarines and frogmen. It begins with the introduction of the Italian version of the human torpedo in 1935, which was successfully used in 1940, and with this as a point of departure, leads into Britain's exploits with Human Torpedo Mk I, Germany's "Kampfschwimmer," Japan's Happy Dragons and our own underwater demolition teams. *Combat* is the account of men who subject themselves to icy waters, isolation and extreme hazards beyond the ordinary risks of war.

For those who prefer to read battle accounts on more solid ground, ***The Battle of Cassino*** is the right choice. Fred Majdalany presents a blow-by-blow, shot-by-shot account of that part of the Italian campaign which ended with the capture of the monastery-fortress on the summit of Mt. Cassino. Majdalany points out that in modern warfare the word "battle" is almost a misnomer, because there are neither the orderly formations of opposing forces nor a specific beginning or end to any particular battle. Rather, today's "battle" is a phase of the whole campaign with a specific object, such as the capture of a certain city, or in this case of a mountain, as its goal. Therefore he feels it necessary to lead up to the eventual capture of Mt. Cassino and to describe several other operations which had a definite bearing on the final outcome. In addition, *The Battle of Cassino* gives you an insight into the behind-the-scenes thinking and planning of the military and civilian leaders of allied forces and Germany.



"Shall I let him go now Chief?"

Burke Davis, in ***Jeb Stuart: The Last Cavalier,*** has added another top-notch biography to his string of portraits of Civil War leaders. General James Ewell Brown Stuart, CSA, is shown as the swashbuckling gallant, with his black-plumed hat and flying cape, fearless, bold, brilliant in the field and devoted to his cause. On the other hand, you see Jeb as a family man, light hearted and as a lover of music. General Stuart has been acclaimed as the South's most outstanding cavalry commander and you ride with him in the raid on Chambersburg, the First and Second Manassas, Gettysburg and his last battle at Yellow Tavern. *The Last Cavalier* has been reconstructed from contemporary letters and diaries, from dispatches, and from the accounts of men who fought with him. In order that you may better understand Stuart, the Southern gentleman, Davis portrays the culture of the period, with its frivolous gaiety, dancing and gambling and of the men who fought to preserve their society.

The old chestnut that truth is stranger than fiction is convincingly bolstered in ***Mysteries of the Pacific.*** Robert de la Croix has collected a series of 11 real-life puzzlers dealing with disappearances of ships and people in the vast Pacific. He begins with an expedition in the late eighteenth century which was sent out to explore and map the ocean and was never heard from again and ends with the mysterious disappearance of Amelia Earhart. Thrown in for a little added flavor are accounts of castaways, ghost ships and desert islands which will satisfy the saltiest among you.

This month's selections finish in a cloud of dust and the smell of burning rubber with John Bentley's exciting novel ***The Faster They Go.*** The author, one of the top racing writers and himself a well-known driver, has you sitting in the co-pilot seat as the hero drives the thrill-packed Carrera Panamericana, Sebring, Le Mans and others. You feel as if you are keeping up the revs, making the pit stops, downshifting and planning the strategy of the race. The story is fictional but many of the names and incidents are recognizable as prominent makes of cars and famous racing figures. This is "he man" writing and a one-course lesson on the ins and outs of driving Grand Prix and sports cars.

ALL HANDS SPECIAL SUPPLEMENT

FOR INTERNATIONAL DEFENSE

report on NATO and SACLANT

No longer need one country face the forces of aggression alone. By means of SACLANT, the seagoing arm of NATO, many of the free countries of Europe in combination with Canada and the United States have combined forces.

Training exercises and maneuvers are part of a tradition as old as the Navy itself, but within recent years a new element has been added. For the first time in history, a sizeable number of U. S. Navymen are learning to work with their opposite numbers of other free nations during times of peace.

Perhaps you've taken for granted the presence of a British cruiser or a French destroyer working out a problem with our own ships during a Mediterranean exercise. Or perhaps you've noticed a squadron of foreign aircraft bound on the same mission as ours.

Not spectacular or showy perhaps, but this may well be one of the most significant sights you're likely to see in your lifetime.

This has been brought about through NATO (North Atlantic Treaty Organization). Where do you, and the U. S. Navy, fit into the picture?

Here's the story of NATO and SACLANT, as told to ALL HANDS *by the office of ADM Jerauld Wright,* USN, *Supreme Allied Commander Atlantic.*

NATO

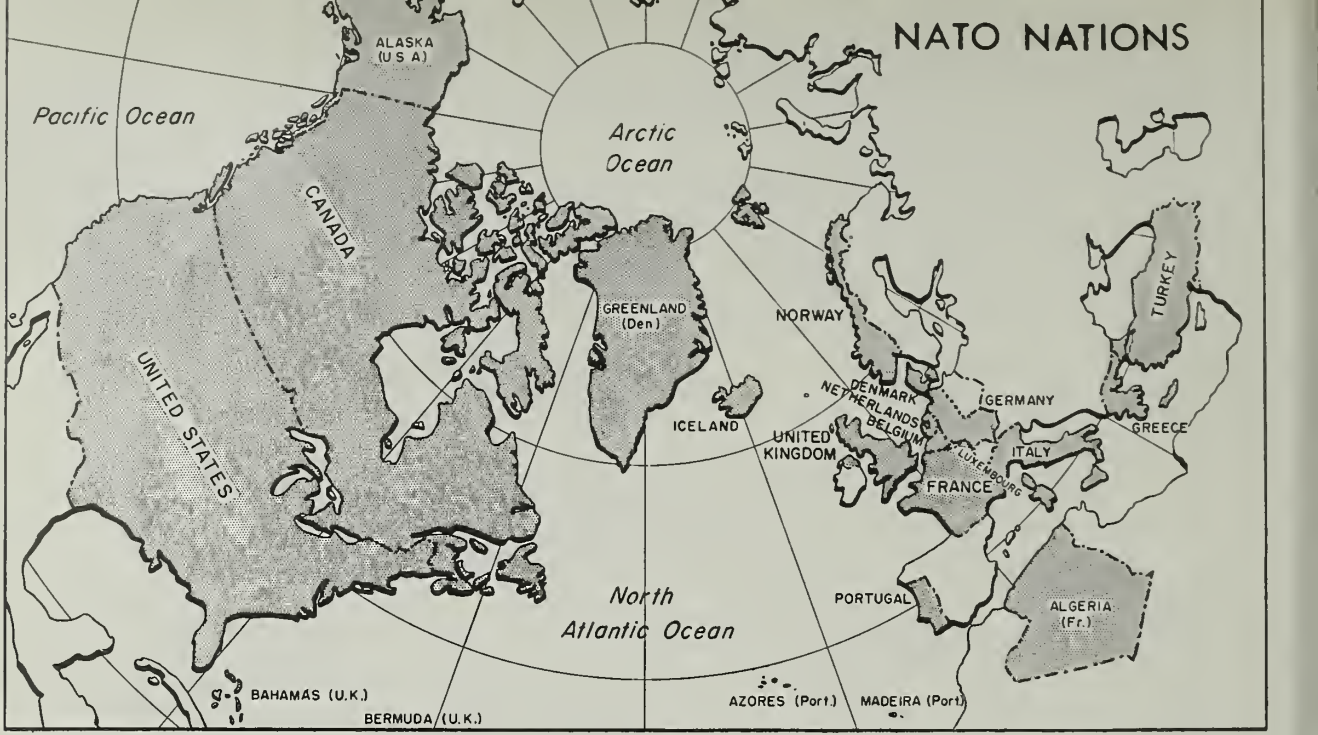
SACLANT

THE BITTER EXPERIENCES of two World Wars convinced the countries of the free world that a strong alliance was necessary for the survival of all. History had proven that an attack upon one of the countries of the Atlantic community threatened the security of the whole North Atlantic area.

The victorious Allies of 1945 knew that some kind of defensive arrangement would be necessary among nations if the world were to avoid another disaster like World War II.

Out of this hope for world security and peace was born the United Nations at San Francisco in 1945. However, it gradually became evident that the creation of the United Nations did not mean that international tensions and open hostilities were at an end. The United Nations alone could not assure security and peace.

Under these circumstances it was natural, therefore, for the group of free nations to try to gain additional security under the framework of the United Nations which guarantees its members the continued right of individual and collective self-defense. Although the Western nations were slow to realize the dangers that faced them, it was apparent that collective defense gave them their best chance for security. They had already learned that nations working together toward a common goal could accomplish much more than those working independently.



On 4 Apr 1949, one of the most revolutionary experiments in international relations took place with the signing of the North Atlantic Treaty Organization, or NATO. At that time, 12 widely-spread nations, varying in size from the United States to Luxembourg—and representing two continents—agreed to work together, not only in the military, but in the political, economc and social fields. North America was represented by the *United States* and *Canada.* On the other side of the Atlantic, *Belgium, Denmark, France, Iceland, Italy, Luxembourg, the Netherlands, Norway, Portugal* and the *United Kingdom* signed the treaty. *Greece* and *Turkey* accepted the Treaty in 1952 and the *Federal Republic of Germany* followed in 1955.

With the Treaty as a foundation, NATO has developed an elaborate structure which has focused on economic, political, social and cultural, as well as military activities. Basically, it is a political alliance aimed to prevent war. An armed attack against one or more of these 15 nations is considered an attack against them all.

No nation lost any part of its sovereignty by joining NATO. It is not a federation, but an alliance among 15 independent nations who have agreed to make defense plans together.

The North Atlantic Council

The work of NATO is carried on by two kinds of agencies—civilian and military.

A civilian group called the North Atlantic Council, is the top policy-making body. Each member is represented on the Council, which meets several times a year at NATO headquarters in Paris, with the chairmanship rotating on an alphabetical basis. The Council has no powers to make decisions binding on its respective governments. It is an organization through which the governments themselves can reach voluntary agreements with each other.

The Military Committee

The Military Committee is the supreme military authority in NATO. Similar to our own Joint Chiefs of Staff, it is composed of officers of Chief of Staff rank of each NATO power. (Iceland, having no military establishment, is represented by a civilian.) The Military Committee concentrates on planning broad military policies and has turned over the day-to-day military routine to two full-time bodies, the Standing Group and

IN ADDITION to a defense force, SACLANT creates friendship. Below: British and French with U. S. sailors.

EVERYBODY'S IN THE ACT—All branches of the service team up at NATO. Here, Army and Navy check message.

the Military Representatives Committee.

The Supreme Commands

The European Command stretches from the northern tip of Norway to the eastern corner of Turkey and this area is under the Supreme Allied Commander, Europe, or SACEUR. Headquarters are in Paris. This command includes most of the land, sea and air forces concerned with the defense of the European continent.

Supreme Allied Commander Atlantic (SACLANT) is the other major NATO command and is of primary interest to you. Eight nations, including Canada, Denmark, France, the Netherlands, Norway, Portugal, the United Kingdom and the United States furnish officers to SACLANT's staff and are the principal contributors of forces and bases. SACLANT headquarters are at Norfolk, Va., and the present Supreme Allied Commander is ADM Jerauld Wright, USN. The Atlantic Command extends from the North Pole to the Tropic of Cancer and from the coastal waters of North America to those of Europe and Africa, including Portugal, except for the Channel and waters around the British Isles. The area covers some 12 million square miles.

The area surrounding the British Isles is common to both SACEUR and SACLANT and is under control of the Commander-in-Chief, Channel, who has a committee of naval experts from the United Kingdom, France, the Netherlands and Belgium to assist him.

Defense of Europe

The defense of NATO falls naturally into three categories: The defense of Europe; the defense of North America; and the defense of the Atlantic and its sea lines of communication which link these two. If one fails, they all fail.

The Supreme Allied Commander, Europe, is responsible for the defense of the allied countries of Continental Europe against invasion. He would, in time of war, control all land, sea and air operations in Europe.

He has a large number of Allied ground and air forces under his command today and others, including naval forces, are earmarked for him in time of war. A large part of these NATO forces are organized and equipped for mobile warfare and they possess fire power far greater than previously known.

Defense of the American Continent

To defend the American continent is the responsibility of the Canadian-U. S. Planning Group. This is the group responsible for the establishment of the Distant Early Warning or DEW Line and the Pine Tree Line to give early warning of an enemy air attack. (See ALL HANDS, September 1956).

Defense of the Atlantic

The defense of the Atlantic is entrusted to the Supreme Allied Commander, Atlantic (SACLANT). In wartime, his job is to guard the sea lanes and deny the use of the Atlantic to an enemy. SACLANT has responsibility for islands in this area, such as Iceland and the Azores, and his duties also include assistance in the defense of Europe.

Primarily, his job is to prevent the enemy from driving a wedge down the Atlantic in an attempt to separate North America from Europe. The sea lanes must be maintained to assure that North America can help Europe in case of war.

All NATO nations bordering on the Atlantic who possess deep sea naval forces have assigned them, in case of war, to the NATO Allied Command Atlantic. This includes almost the entire Atlantic Fleets of both the United States and the United Kingdom. The defense of territorial waters, ports and harbors remains a national responsibility and the coastal forces remain under national control.

NATO OFFICERS salute common cause during ceremonies at SACLANT Hq. At center is ADM Jerauld Wright.

During peacetime, the Allied Command Atlantic develops defense plans, conducts training exercises, and advises on logistical requirements.

Allied Command Atlantic

Here's a further breakdown of the organization and responsibilities of the Allied Command Atlantic, the first international command in history.

The second of the two NATO commands organized under a Supreme Commander, the Allied Command Atlantic was officially established in April 1952. It is an operational, rather than an administrative, command.

Its wartime forces would include units of the armed forces of eight different nations—Canada, Denmark, France, the Netherlands, Norway, Portugal, the United Kingdom and the United States plus the base facilities of Iceland. These forces are predominantly naval.

Unlike SACEUR, SACLANT has no forces permanently attached to his command. For training purposes and in the event of war, forces are assigned to him.

So far as is known, SACLANT is the only Allied military headquarters ever to be established in peacetime in the United States. The headquarters is manned by Army, Navy, Air Force and Marine Corps officers of the eight NATO nations contributing to the defense of the Atlantic. An additional force of enlisted personnel are men and women from the U. S. Navy (See September 1952, pp. 31-35; October 1952, pp. 28-34; May 1955, pp. 16-19 of ALL HANDS) plus a U. S. Marine Corps detachment which performs guard duties.

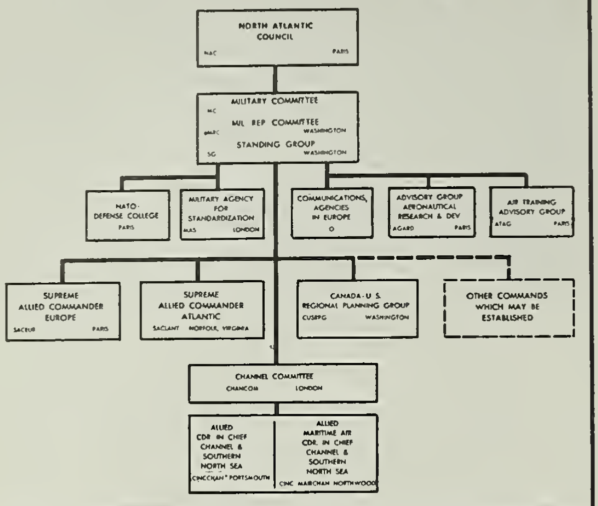
The staff of SACLANT is divided into seven divisions: Personnel and Administration; Intelligence; Plans; Policy and Operations; Logistics; Communications; Budget and Finance; and Public Information.

Here are the lines of communications which reach out to all ships in all corners of the Atlantic. Intelligence on all aspects of the military threat to the Atlantic region are centered here. Plans and instructions by which the naval forces of NATO would operate in time of war, are formulated here.

SACLANT Plans and Operations

SACLANT planners are faced with four big problems:

- All the nations in Europe are dependent upon the



The North Atlantic Treaty Military Organization

NORTH ATLANTIC COUNCIL
NAC
PARIS
MILITARY COMMITTEE
MC
MIL REP COMMITTEE
MRC
WASHINGTON
STANDING GROUP
SG
WASHINGTON
NATO DEFENSE COLLEGE
PARIS
MILITARY AGENCY FOR STANDARDIZATION
MAS
LONDON
COMMUNICATIONS, AGENCIES IN EUROPE
ADVISORY GROUP AERONAUTICAL RESEARCH & DEV
AGARD
PARIS
AIR TRAINING ADVISORY GROUP
ATAG
PARIS
SUPREME ALLIED COMMANDER EUROPE
SACEUR
PARIS
SUPREME ALLIED COMMANDER ATLANTIC
SACLANT
NORFOLK, VIRGINIA
CANADA-U S. REGIONAL PLANNING GROUP
CUSRPG
WASHINGTON
OTHER COMMANDS WHICH MAY BE ESTABLISHED
CHANNEL COMMITTEE
CHANCOM
LONDON
ALLIED CDR IN CHIEF CHANNEL & SOUTHERN NORTH SEA
CINCCHAN PORTSMOUTH
ALLIED MARITIME AIR CDR. IN CHIEF CHANNEL & SOUTHERN NORTH SEA
CINC MAIRCHAN NORTHWOOD

heavy tonnage of seaborne traffic by cargo ship, passenger ship and tanker for their economic support in peace-time and for reinforcements and survival in time of war.

- If the European nations were denied access to the seas they could not survive.
- If the United States were denied use of the seas, she would soon lose her overseas allies and would be forced back to her own shore line to fight the war alone from her continental bases.
- The loss of the seas would result in loss of any initial advantage from an atomic superiority because this advantage could not be followed up in Europe through use of military and economic support of North America.

The concept of defense of the Atlantic can be summed up as: Strike and—at the same time—defend.

The Allied Command Atlantic is essentially a mobile, elusive airfield complex at sea, with its own offense, defense and support built in. It is geared for atomic war: the Fleet would be well dispersed against atomic attack and would cover an area about the size of the state of Maine.

Because it is always on the move it would not be subject to pin-pointing for guided missile attack like the stationary targets ashore. The Fleet could project its offensive power right into the heart of enemy naval bases and airfields that are the main source of threat to SACLANT's control of the Atlantic.

The defense aspect of SACLANT includes the use of modern anti-submarine forces specifically equipped and trained to hunt and kill submarines. This team of ships and aircraft can be moved quickly from one spot to another. They should produce the biggest payoff when used in a forward defense role to operate in the narrow seas around Iceland through which the enemy submarines must pass before they can get to merchnat shipping further to the south.

Some of these same type forces would also be used for close-in protection of NATO merchant ships against those submarines that have penetrated the forward defense and have gotten into the broad Atlantic. For this job, the convoy system would be used, with groups of merchantmen guarded by escort destroyers and covered by long-range shore-based patrol planes.

Briefly, the SACLANT *concept for defense* of the Atlantic is:

- To strike, with the maximum capacity, the enemy airfields and naval bases which support the forces which would seize control of the seas.
- To defend the broad Atlantic as far forward as possible.
- To provide close-in protection of our trans-Atlantic sea lanes.

Combat Readiness

To be effective, NATO cannot be a mere collection of national units. They must be welded into a smoothly working, coordinated fighting team. Of the several ways combat efficiency can be improved, the most important is by training. SACLANT is constantly conducting two types of exercises: Those involving operations by the fighting forces themselves; and the "indoor" command post exercises.

Each year there are many of the former, both small and large scale. Periodically, a large-scale exercise is held involving the three major NATO commands—SACLANT, SACEUR, and CHANNEL. The small-scale exercises cover such fields as convoy escorting, anti-submarine warfare, mine laying and mine sweeping, and Fleet operations.

An example of the character and scope of the major exercises is *Mariner*. This was the largest international naval exercise ever held, involving nine nations, and lasting 19 days. *Mariner* included exercises in convoy protection, naval control of shipping, and striking Fleet operations in northern waters. Enemy strategic concepts were introduced and, to make the training as realistic as possible, the "enemy" role was portrayed by surface raiders, submarines and land-based air elements drawn from NATO forces.

SACLANT Logistics and Financing

The combat efficiency of the armed forces of a coalition largely depends on the extent to which the various partners are trained on uniform lines, use the same system of staff work, the same operational procedures and techniques and employ the same communications system.

Navies still need beans, bullets and black oil. To carry out NATO strategy, the forces need logistic support, such as maintenance work and repairs, as well as food, fuel, ammunition and equipment.

One of the most difficult problems confronting the Allied military forces is the question of interchangeability of materials provided by the members. Will the naval forces of one nation be able to use the supplies of another? Can one nation effectively support and supply the ships and aircraft of another?

So far as possible, NATO has tried to standardize everything it uses and everything it does. Some items, such as fuel oil, can be used for ships of any kind, regardless of their nationality. Fuel and lubricants are standardized, and so is the refueling equipment used by NATO ships and aircraft. These items can be obtained wherever they are available, regardless of the nation in which the source of supply is located.

In other fields, such as electronics, NATO has established many standard radars for aircraft detection and sonars for submarine detection. Electrical current which varies from country to country is being standardized aboard ship. The communications field uses standard equipment and agreed frequencies as much as possible. Many types of aircraft and smaller naval ships, such as minesweepers, are constructed according to NATO standards and can be used and repaired by other NATO nations.

The areas of standardization also reach out to other important fields such as operating procedures, tactics, signals and military operations orders. NATO nations may speak different lanuages but they all respond to the same signals.

As a taxpayer, you have a legitimate interest in NATO finances. When it was first formed, it was agreed that the cost should be shared but there was considerable discussion as to the basis. Some members suggested "capacity to pay," but this was found to be an expression almost incapable of definition. Others suggested that the nation that used the new facilities would pay for them. Eventually, by a combination of these and other factors, a cost-sharing agreement was reached. Today, all members contribute to the fund and after the money has been spent, there is an audit by representatives of all countries.

NATO has already approved a construction program of over two billion dollars spread over a number of years and involving construction from the far north of Norway, in France, in Portugal, and in Italy, to Greece and Turkey. SACLANT, as well as other NATO headquarters, is supported by all 15 members, even Greece and Turkey, who are far from the Atlantic Ocean.

The amount of money spent each year by NATO amounts to only one-half of one per cent of the total defense budgets of the NATO countries. That's a lot of protection for a small investment.

Achievements of NATO

NATO has made great progress since 1949. It is well recognized that NATO's achievements cover more than one field even though the most spectacular ones are in the military.

To preserve peace and strengthen the security of the North Atlantic Community was the first job. Peace has to be maintained to promote the success of other joint actions of these nations.

Among other factors, the increase in military forces of NATO since 1949 has helped to reduce the danger of another major war. After eight years of effort, NATO has about 100 trained divisions (active and reserve), about 6000 aircraft and 1500 naval vessels. Economic cooperation with NATO has kept defense planning and build-up within the limits imposed by the economic and financial capacity of the member countries.

Other factors besides numerical figures must be used as a basis for measurement of achievements such as integrated forces, fire-power and combat value. The NATO defensive system benefits from the most recent developments in weapons and other techniques.

The number of airfields equipped for jet aircraft rose from 15 in 1950 to 125 in 1954, and reached 165 in 1955. The communications networks of numerous countries have been greatly extended in such fields as submarine cables, land lines and radio relay circuits.

By the end of 1956 about 3750 miles of pipelines for transportation of fuel, and storage tanks with a total capacity of over 1,000,000 cubic meters were in service.

While trying to answer the security needs of the present, the North Atlantic Community looks forward from a troubled international past to a more enlightened future. The ultimate success of the Atlantic Alliance depends primarily upon the friendship and respect that exist among the people of the NATO countries. While cooperation by governments is essential, a cooperative spirit among the men and women who come into contact with one another is equally vital. Service abroad puts naval personnel in a unique position to promote friendship and understanding.

The North Atlantic Treaty Organization represents a major advance toward preserving the peace of the world.

SEATO — A Beginning

The quest for peace through collective security among free nations of the world has not stopped with the North Atlantic Alliance. Realizing the need for collective military and economic strength in Southeast Asia and the Southwestern Pacific, top diplomats of eight nations signed the Southeast Asia Collective Defense Treaty and Pacific Charter, commonly known as SEATO, at Manila on 8 Sep 1954. The Treaty came into force on 19 Feb 1955, following the deposit of ratifications by the eight member countries—Australia, France, New Zealand, Pakistan, the Phillipines, Thailand, the United Kingdom and the United States.

When World War II ended, the peace which people everywhere desired did not come to Asia. In many parts of Asia a pattern of Communist-inspired insurrection and aggression developed, culminating in the violent assault on the territory of South Korea.

SEATO member nations have bound themselves together by Treaty because they have common ideals and hopes for the future of their peoples and are determined to resist interference with peaceful progress toward their goal. History shows that evil can only be overcome by a positive faith. SEATO has such faith. The determination of its members to prevent and deter further aggressive expansion into Southeast Asia by armed force and subversion has made an important contribution to the preservation of peace in the area.

ALL TOGETHER—U.S. Ships and Navymen are working with others from NATO to preserve freedom of the seas.

TAFFRAIL TALK

Blackdog has finally lost a battle. It was time—not a canine adversary—that finally brought down the tough, cheerful, utterly useless and utterly admirable mascot of ZP-2, NAS Glynco, Ga.

Utterly useless? Well, not quite.

Then an estimated six years old, Blackdog received his lighter-than-air training en route to Lakehurst when his squadron was transferred from South Weymouth, Mass. He received his Quarter Wing after flying the minimum required hours and then continued to assist the ground handling officers during all flight operations. Blackdog was always the first to retrieve the line and the last to let go on take-off.

In July of 1951, ZP-2 and Blackdog were ordered to change their home base to Glynco. By this time, solely on merit and personality, he was CO of the Squadron, although he permitted certain promising juniors to relay his orders to all hands.

In '52, he joined the search party with ZP-2 when two servicemen from Jacksonville, Fla., were reported missing in the Okefenokee Swamp in the Waycross area. (The men returned to their base two days later, unaware of the concern their absence had created. Blackdog had a fine time, even if the rest of his party did not.)

The following year, he alerted the duty section when a freak accident in the form of falling pieces of lumber from the hangar ceiling punctured one of the blimps. It was Blackdog's loud barking that alerted the crew who were able to supply emergency patches and avert a disaster.

In the years 1953, '54 and '55, Blackdog was to be found barking at the heels of ZP-2 men hastening them on during the frequent seasonal hurricane evacuations and forest firefighting.

It was in 1955 that he achieved his greatest heights. As with all great legends, the details are somewhat obscure. As All Hands first heard it and so reported the event in the May 1956 issue (page 41), Blackdog hung on with his teeth. However, his official biographer who relayed the sad news of his passing, S. H. Bruck, SN, tells the story like this:

"On the evening of 12 Aug 1955, ZP-2 was alerted that a hurricane was approaching. All airships and crews immediately started their evacuation to escape Hurricane Connie. Blackdog was right there, ground-handling with the rest of the men when one of the lines became entangled around his legs. He was airborne for about one hour and twenty minutes before he was discovered, dangling below the blimp, and was finally deposited in the arms of the waiting ground-handling party."

The day Blackdog had dreaded finally came as it does to all airmen who live long enough: he was grounded. Although his heart was still in ground-handling, Blackdog finally resigned himself to the fact that eventually all Navymen find themselves in drydock.

All Hands has never had the pleasure and honor of meeting Blackdog personally. Nevertheless, the sympathy of the staff is extended to the men of Airship Squadron Two in the time of their loss.

His stone reads: Blackdog. A good shipmate.

No, not utterly useless.

The All Hands Staff

The United States Navy

Guardian of Our Country

The United States Navy is responsible for maintaining control of the sea and is a ready force on watch at home and overseas, capable of strong action to preserve the peace or of instant offensive action to win in war.

It is upon the maintenance of this control that our country's glorious future depends. The United States Navy exists to make it so.

We Serve with Honor

Tradition, valor and victory are the Navy's heritage from the past. To these may be added dedication, discipline and vigilance as the watchwords of the present and future. At home or on distant stations, we serve with pride, confident in the respect of our country, our shipmates, and our families. Our responsibilities sober us; our adversities strengthen us.

Service to God and Country is our special privilege. We serve with honor.

The Future of the Navy

The Navy will always employ new weapons, new techniques and greater power to protect and defend the United States on the sea, under the sea, and in the air.

Now and in the future, control of the sea gives the United States her greatest advantage for the maintenance of peace and for victory in war. Mobility, surprise, dispersal and offensive power are the keynotes of the new Navy. The roots of the Navy lie in a strong belief in the future, in continued dedication to our tasks, and in reflection on our heritage from the past. Never have our opportunities and our responsibilities been greater.

ALL HANDS the Bureau of Naval Personnel Information Bulletin, with approval of the Bureau of the Budget on 23 June 1955, is published monthly by the Bureau of Naval Personnel for the information and interest of the naval service as a whole. Opinions expressed are not necessarily those of the Navy Department. Reference to regulations, orders and directives is for information only and does not by publication herein constitute authority for action. All original material may be reprinted as desired if proper credit is given ALL HANDS. Original articles of general interest may be forwarded to the Editor.

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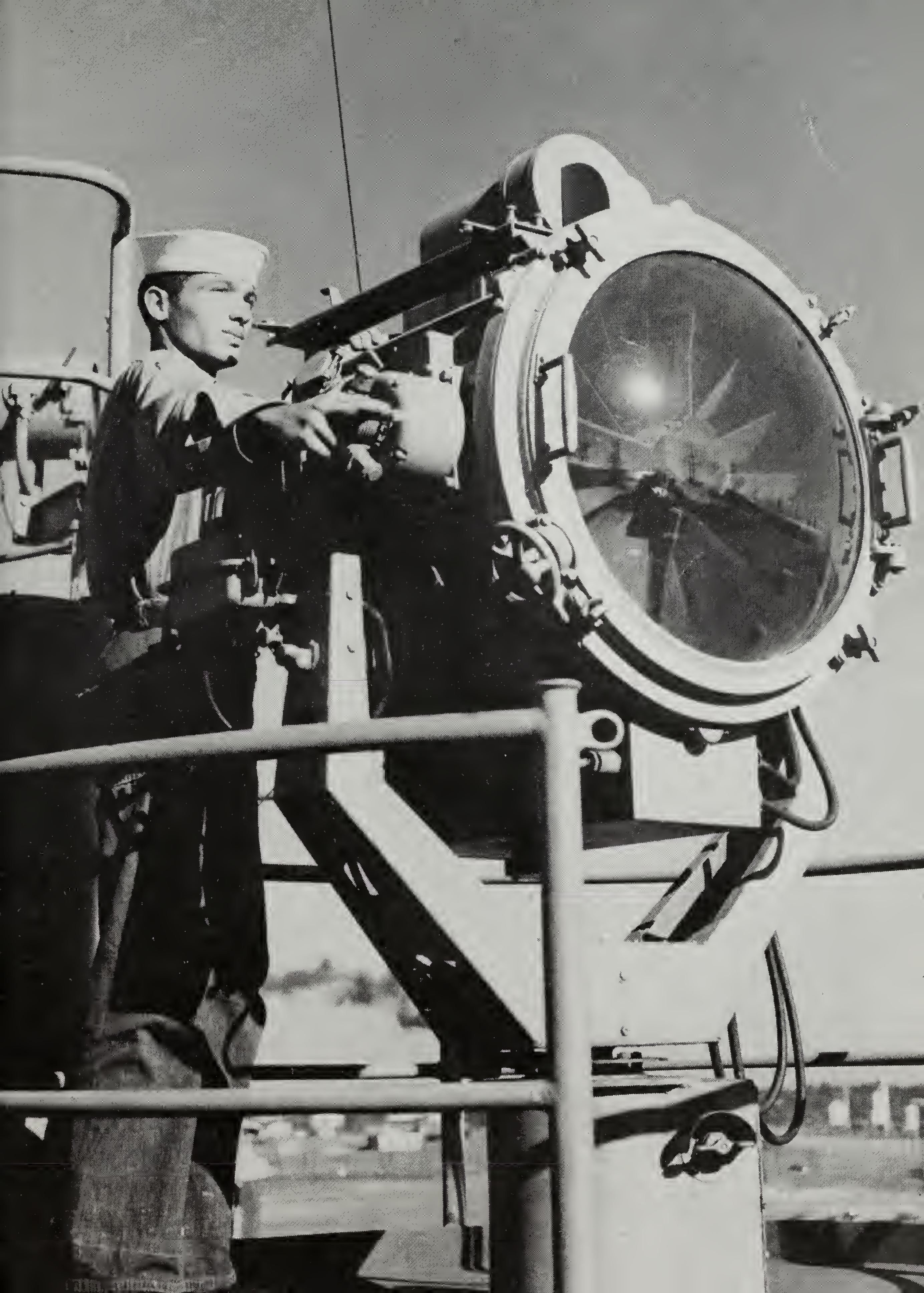
● AT RIGHT: Signalman on board USS *Sierra* (AD 18) sends last-minute instructions to one of her brood leaving the Escort Piers at Norfolk, Va., for operations at sea.



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VITAL OCEAN ROUTES MUST BE KEPT OPEN

ALL HANDS

THE BUREAU OF NAVAL PERSONNEL INFORMATION BULLETIN

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NOVEMBER 1957

ALL HANDS

THE BUREAU OF NAVAL PERSONNEL INFORMATION BULLETIN

NOVEMBER 1957 Nav-Pers-O NUMBER 490

VICE ADMIRAL JAMES L. HOLLOWAY, Jr., USN
The Chief of Naval Personnel
REAR ADMIRAL K. CRAIG, USN
The Deputy Chief of Naval Personnel
CAPTAIN O. D. FINNIGAN, Jr., USN
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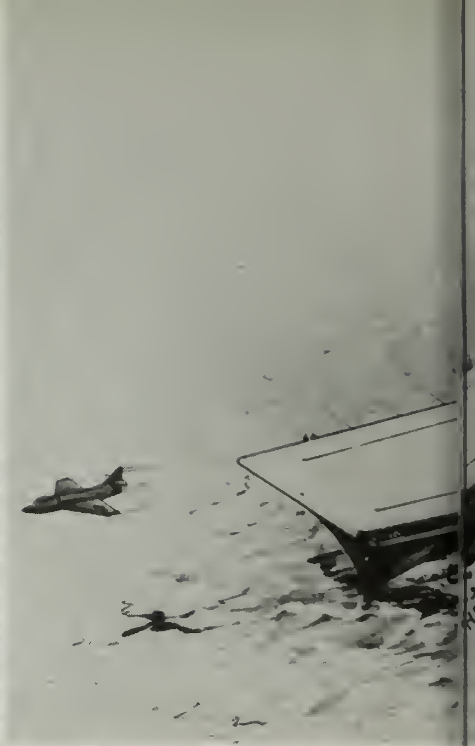
• FRONT COVER: NOSE DIFFERENCE—Bow-on view of atomic sub *USS Nautilus* and *USS Greenling*, (SS 213), a conventional World War II Fleet-type submarine, points up the difference in underwater ships. Photo by John J. Krawczyk, FTC, USN.

• AT LEFT: SCOPE OF IT—Skyline of New York City is shown here as it was photographed through the periscope of nuclear-powered submarine, *USS Nautilus*, SS(N) 571, from about two miles out in the New York harbor.

• CREDITS: All photographs published in ALL HANDS are official Department of Defense Photos unless otherwise designated.



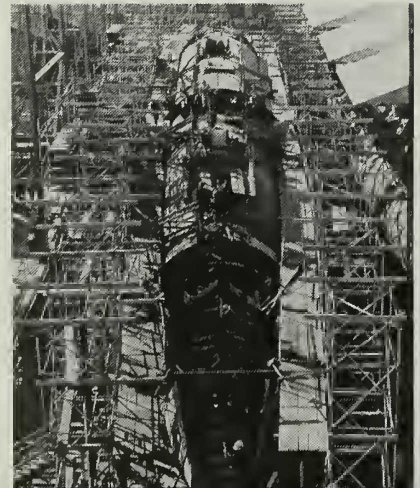
MISSILES AND ATOMS—*USS Halibut,* will be first A-powered missile sub.

WHAT'S NEXT

USS Seawolf, SS(N) 575

USS Long Beach, CG(N) 9

USS Sargo, SS(N) 583



THIS IS THE STORY of our new nuclear Navy.

It's a nuclear Navy that's fantastic and unique, far different from anything that has ever sailed the seven seas. It's here today, and every Navyman is a part of it.

Although most of us have been charter members of this nuclear Navy since its birth, very few Navymen have had the opportunity to get a firsthand look at it.

But just suppose you were one of those Navymen who has had a chance to get a close look at the atomic Fleet.

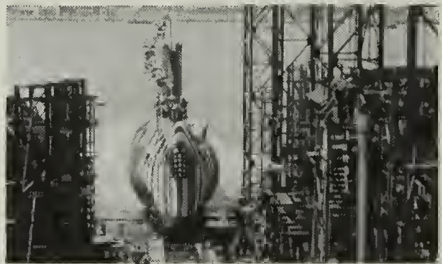
In USS *Nautilus,* SS(N) 571, the world's first atomic submarine, you've traveled at speeds and witnessed underwater feats which are still wrapped up in security. Again in USS *Seawolf,* SS(N) 575, you've seen how another type of atomic propulsion plant operates.

You've made an extensive tour of *Skate,* SS(N) 578 — our third nuclear submarine — while her construction was nearing completion, and visited other A-subs in the building ways.

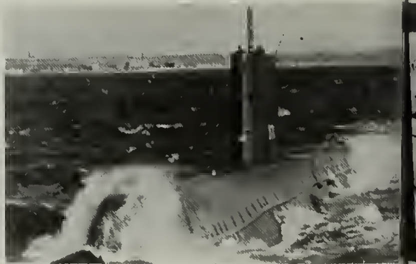
Going aboard the full-scale wooden mock-ups of *Skipjack,* SS(N) 585, the first in a series of new, fast attack atomic submarines, and *Triton,* SSR(N) 586, the largest submarine ever built, you've seen a preview of what's in store for tomorrow. Also, you've been lucky enough to visit the Atomic Energy Commission's National Reactor Testing Station at Arco, Idaho, to see what's going on at the Naval Reactor Facility there.

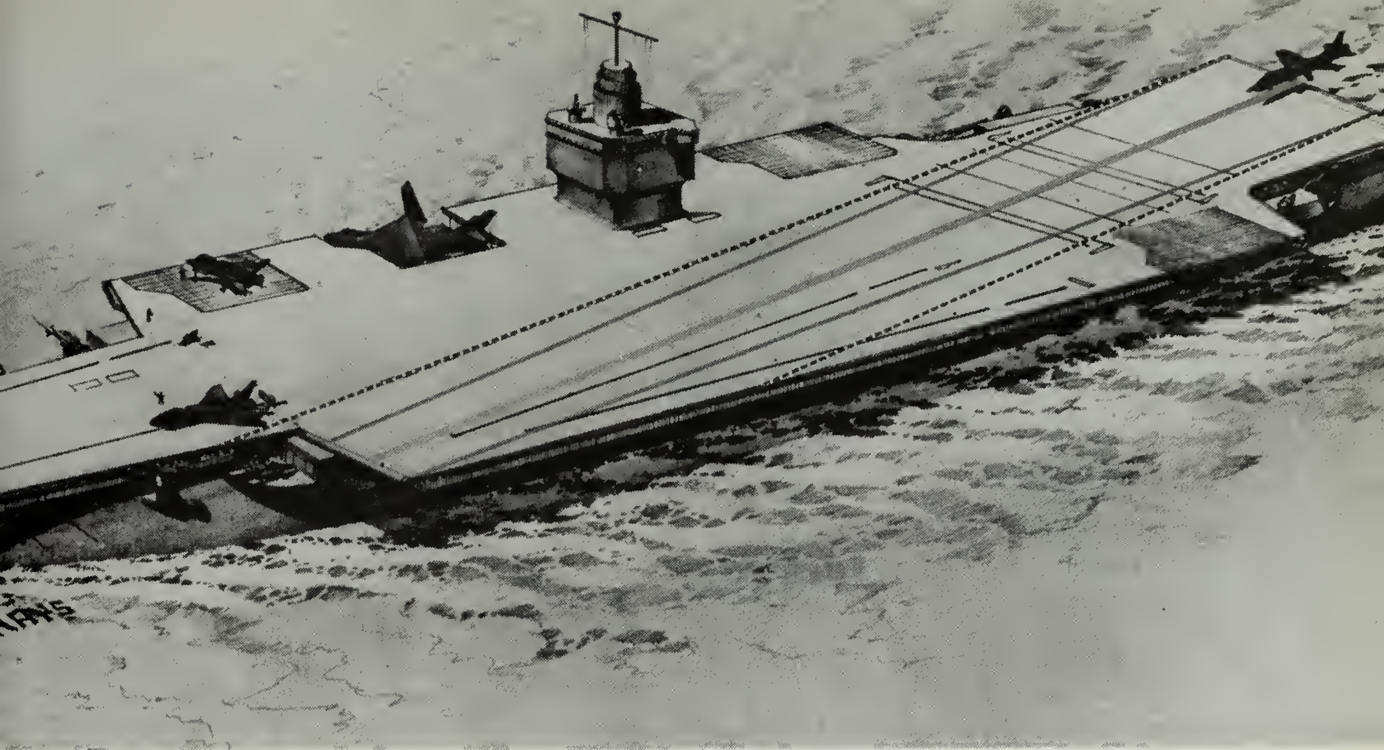
On top of all this, you've had the opportunity to meet some of the men who'll be sailing our underwater nuclear Fleet, as well as those who'll operate the nuclear reactors in *Long*

USS Skate, SS(N) 578



USS Nautilus, SS(N) 571





A-POWER TO BURN—Atomic aircraft carrier in current ship building program will have eight reactors.

N THE NUCLEAR FLEET?

Beach, CG(N) 9, and the still unnamed CVA(N) 65, recently authorized 85,000-ton nuclear aircraft carrier. (This report is based on just such an on-the-scene tour of the atomic Fleet in the making by the writer.—ED.)

The story of the nuclear Navy does not have to go very far back to its beginning. Back in April 1948, the Chief of the Bureau of Ships (Vice Admiral E. W. Mills, USN) addressed the Underseas Warfare Conference in Washington and summarized the Navy's efforts up to that date to obtain action on the development of a nuclear power plant.

You might say that conference really marked the start of our nuclear Navy. Shortly thereafter, the Atomic Energy Commission established the Submarine Thermal Reactor (STR) project for the development, engineering design, construction and operation of the STR Mark I. Rear Admiral H. G. Rickover (then Captain), USN, was assigned to the Atomic Energy Commission to head this project. This was to be a prototype of the reactor for the world's first atomic-powered ship — the formal beginning — and it was just nine years ago.

An increasing number of Navymen are getting in on the ground floor in the nuclear Navy. You may be the next. You don't have to be a mathematical genius or an electronics engineer either. Gary A. Johnson, ICFN, USN, is just 19 years old, yet he has been to the Naval Reactor Facility at Arco, Idaho, and has completed nuclear training there. A remark he made is typical of the enthusiastic attitude of the Navymen working in this new field.

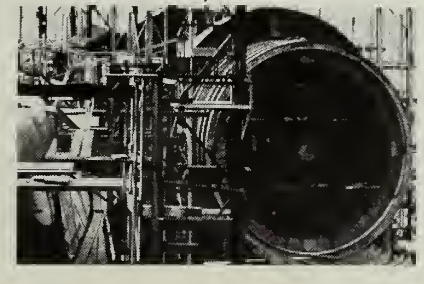
"Just think! Little ole me, getting in at the beginning on a project as big as this. They've already authorized 21 nuclear ships. What will we have to work with 10 years from now?"

The answer to that question is back in Washington, in the office of Admiral Arleigh A. Burke, USN, Chief of Naval Operations. Near his desk he keeps a large flat book containing the Navy's two master plans for our Fleet of today and tomorrow. One, which is revised each year, covers firm shipbuilding plans for the next several years. The other is long range. It copes with the question: "Where is the Navy going?" and looks much further into the future.

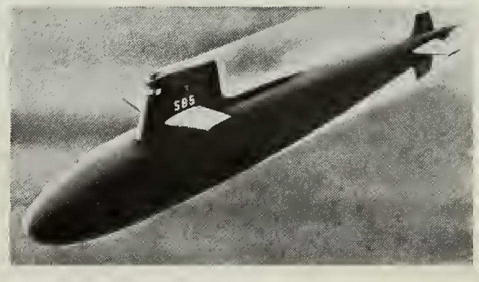
This book contains the blueprints and timetable for the greatest planned naval revolution in history. And it's one that will be carried out in an almost unbelievably short time. Most people would consider these plans "impossible" as they call for

USS Swordfish, SS(N) 579

USS Triton, SSR(N) 586



USS Skipjack, SS(N) 585



the conversion of most of our combatant Fleet from oil to nuclear power in the short span of less than 20 years.

Admiral Burke, however, likes to point out that it took 400 years for navies to shift from spears to gunpowder, 75 years from sail to steam, but less than 12 years from the unlocking of the atom to nuclear power.

Just one of these nuclear task forces will be only a fraction of the size of those commanded by Admirals Halsey or Spruance in World War II. But in terms of weapons and striking power, the task force of tomorrow will be many times greater than even those of today.

All this sounds incredible—for today these mighty nuclear task forces are only on paper. They do, however, answer that question about our nuclear Navy of tomorrow. But, what about today?

Our nuclear Navy today—in operation, being built or already authorized—consists of 19 submarines, one cruiser and one carrier. In addition, the Navy and the AEC are at work developing a destroyer-size nuclear propulsion plant.

The only operational units of our nuclear Navy today are *Nautilus* and *Seawolf*. The third, *Skate*, the first of a new class of attack submarines, was launched in May of this year and should soon join the Fleet.

Types of Atomic Submarines

Our family of atomic submarines today consists of several different types. Here's a brief run down on them:

- ***USS Nautilus*, SS(N) 571**—Often referred to as the "Model T" of the Navy's atomic underseas Fleet, *Nautilus* has performed beyond all expectations. The story of her spectacular successes is well known. *Nautilus* is unbelievable. However, one must see for himself to realize what a revolutionary weapon she actually is.

Thanks to her unique power plant, *Nautilus* does not have to surface to recharge batteries and needs to refuel only at infrequent intervals. She's a "true" submarine — the world's first — and can cruise submerged at will.

Since first getting "Underway on Nuclear Power," at 1100, 17 Jan 1955, SS(N) 571 has been at sea more than 7000 hours. During that time, she has steamed more than 85,000 miles. Of this, more than 53,000 were submerged.

Nautilus operated for 26 months and steamed more than 62,500 miles before being refueled. If she had been diesel-powered, she would have needed enough oil to fill a train of tank cars one and one-half miles long. Her first uranium core was equivalent to over 2 million gallons of fuel oil—enough to fill 217 railroad tank cars.

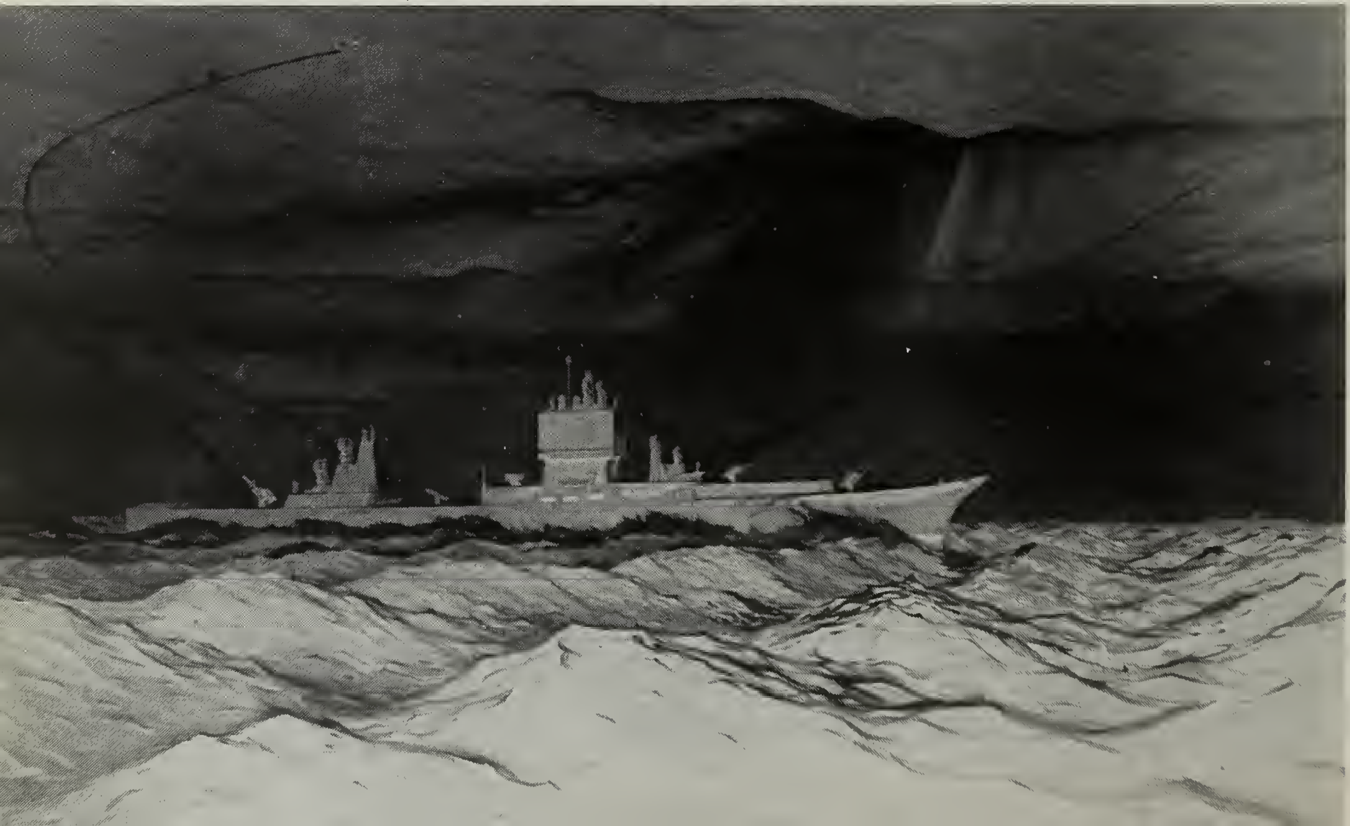
She is now cruising on her second core which is said to be "a significant advance" and even more efficient than her first.

Our pioneer A-sub is about 320 feet long, has a beam of 28 feet, and a surface displacement of over 3100 tons. Equipped with the most modern submarine armament and electronic equipment developed to date, *Nautilus* is manned by a crew of 13 officers and about 95 enlisted men. That's about 10 more than her normal complement as she usually carriers additional personnel for training puposes.

Because a nuclear reactor requires no oxygen for its operation—as a combustion engine does—*Nautilus* is able to operate at top efficiency for long periods while submerged. She's capable of operating at full speed all the time. The submerged speed of a conventional World War II sub was two or three knots under ordinary conditons, and only as much as eight or nine knots for a full hour. (A conventional steam plant in a surface ship rarely ever ran more than 12 hours consecutively at full speed even in wartime.)

Nautilus has cruised submerged from Key West to New London, a distance of 1200 miles at an average speed of over 20 knots. Her longest

TOUCH OF TOMORROW—A-powered missile cruiser, *USS Long Beach,* shown in drawing will be first surface A-ship.



submerged run was 3032 miles, from Panama to San Diego. During that run, *Nautilus'* speed of advance was 19.1 knots.

The high operating capabilities of *Nautilus* were not obtained by sacrificing the welfare of her crew. In fact, her living conditions are excellent—far better than you would imagine.

Her interior was designed for the comfort of her crew. Special eye-resting color schemes and adequate air conditioning help make it pleasant and habitable. It features individual lights and ventilation louvres for each bunk.

To keep long submerged cruises from becoming monotonous, many other "unheard of" conveniences were added. (During one cruise, *Nautilus* stayed submerged for more than 14 days.) They include a permanently mounted movie screen to show both conventional and wide-screen movies, a 100-play juke box, coke machine, tape recorder and a record player that will play records of all sizes and speeds.

SAIL TO ATOM—DD men look back through 'history' as they pull along side *USS Nautilus* moored by WW II type sub with masts of *Constitution* in rear.

She's also equipped with a 21-inch TV set in the crew's mess which can be viewed while submerged so long as the sub's radio antennas are exposed; automatic washing machines, radio, fluorescent lighting in every compartment, a photo lab, electric hand dryers; an icebox which is always open and well stocked for between meal snacks, ice cream machines, and such taken-for-granted items as a library, hobby crafts and games.

Her skipper is Commander William R. Anderson, USN, who relieved Captain Eugene P. Wilkinson, USN, earlier this year.

Performance-wise, *Nautilus* is most celebrated for her endurance. However, her most significant aspect is her reliability.

In every respect, she has operated exceptionally well and has surpassed all expectations. In maneuvers or

DAWN OF A NEW FLEET—World's first atomic powered ship, *USS Nautilus*, SS(N) 571, heads down East River.

NUCLEAR RESEARCH—Navy scientists experiment with A-fuel at Naval Lab.

actual Fleet operations, it's the same story. *Nautilus* has proved so great, that she's forcing Navy tacticians to rewrite the books. And remember, she's only the "Model T." What will her successors have to offer?

- **USS Seawolf, SS(N) 575** — Although not so highly publicized as *Nautilus,* our second nuclear-powered submarine is equally as potent. With the exception of her reactor and its auxiliary systems, *Seawolf's* propulsion plant is generally similar to that of *Nautilus.* In other characteristics, length, beam and surface displacement—*Seawolf* is somewhat larger. She's about 330 feet, 27 feet and over 3200 tons respectively.

Seawolf's reactor is cooled by liquid sodium instead of high pressure water as in *Nautilus.* When plant designs for our first two A-subs were first considered, sodium appeared to offer several advantages over water as a reactor coolant. Construction of the two plants was undertaken simultaneously because the need to develop a nuclear-powered submarine was great and it was not known then that either type of plant would work.

During dockside tests—even before *Seawolf* put to sea—a failure occurred in the steam superheater and steam leaks appeared in the piping connected to the superheater of the steam generating system.

These troubles, however, were not in the reactor. Although they were not corrected permanently, *Seawolf* was put into operation after the superheaters were bypassed. She finally put to sea in January 1957. With these piping modifications, she's limited to 80 per cent of her designed horsepower rating and 90 per cent of her designed maximum speed. In spite of these limitations, *Seawolf* is capable of cruising at speeds in excess of 20 knots for unlimited periods.

Seawolf has been operational for the past six months. According to CDR Richard B. Laning, USN, *Seawolf's* commanding officer, our second atomic sub has cruised more than 20,000 miles without having any engineering difficulties. Since being commissioned on 30 Mar 1957, she has been at sea two out of every three days. To date, *Seawolf* has traveled more than 14,000 miles submerged.

Since *Seawolf* is capable of cruising for long periods without surfacing, extreme care was also taken in her interior design and planning. Her machinery and control stations have been arranged so that the crew can operate at peak efficiency at all times. Placement of wheels, gauges and lights have been worked out to minimize fatigue in accomplishing shipboard assignments.

There is about as much space for the comfort and convenience of the crew in our second atomic submarine as you would find in a destroyer or similar type surface ship.

Seawolf's nuclear reactor produces power for her "housekeeping" equipment as well as for her propulsion and armament. The electricity-producing potential of her power plant —which contribute to the well-being of *Seawolf's* 103-man crew (10 officers and 93 enlisted men)—could be harnessed to supply similar domestic needs for a city of about 32,000 people.

Seawolf has operated against *Nautilus,* as well as other underseas and surface units during ASW exercises. She recently participated in NATO's Operation *Strikeback.*

- **USS Skate, SS(N) 578**—She's the first of four nuclear attack submarines which have been designed after the advanced conventional fast attack submarines of the *Tang* class. Built at Groton, Conn., *Skate* is scheduled to join the Fleet soon.

According to CDR James F. Calvert, USN, *Skate's* CO, the SS(N) 578 is the Navy's first "production" model of our nuclear underseas Fleet. *Skate's* design stresses "simplification and refinement." She is the first of our nuclear submarines built to date which did not have its power plant tested in a land-based prototype reactor.

Skate is also the first submarine to be designed as a result of experience gained from *Nautilus.* Her atomic engine will drive the medium-size submarine at great speeds on and under the surface.

Similar to *Nautilus* and *Seawolf, Skate* will be able to operate submerged for long periods of time, a great advantage in both offense and defense.

Skate is about 25 per cent smaller than our first two A-boats. She's only about 265 feet long. Her crew consists of eight officers and 75 enlisted men — many of whom served in *Nautilus* and *Seawolf.*

In additon to *Skate,* three other nuclear Fleet-type subs have been authorized. **Swordfish, SS(N) 579,** and **Sargo, SS(N) 583,** have been launched, and **Seadragon, SS(N) 584,** is being built.

A fifth atomic submarine, **Halibut, SSG(N) 587,** the U. S. Navy's first nuclear sub to be designed and built as a guided missile launcher, will also incorporate the same type reactor as *Skate. Halibut* is being built at the Mare Island (Calif.) Shipyard.

- **USS Triton, SSR(N) 586**—This is the largest submarine ever built and is the first to be powered by two nuclear reactors. During World War II, both France and Japan had large subs but *Triton* will be even larger than these.

Displacing 5450 tons, our first nuclear radar picket sub is bigger than our largest destroyer-type vessel and almost as big as our antiaircraft light cruisers of World War II vintage.

Nautilus and *Seawolf* — in size, living conditions and capabilities— are no comparison whatsoever to our conventional submarines. As big and as advanced as they are, however, they too are dwarfed and cannot be compared with *Triton.* A visit to *Triton* makes one think that he's in a dream ship of the future.

She is designed to be fast enough to operate in advance of our fast carrier task forces and to provide them with radar information. She'll have the radar picket capabilities of a high-speed submersible DER.

- **Skipjack, SS(N) 585** — As unbelievable as *Triton, Skate, Nautilus* and *Seawolf* may be, here's the Navy's most amazing ship in its entire nuclear Fleet. The first of a series of seven high-speed attack submarines, *Skipjack* represents a marriage of the tear-drop hull with a nuclear engine. With these two outstanding features united, SS(N) 585 and her sister ships will actually "fly" underwater as an airplane flies through the air. She'll be capable of out-maneuvering the fastest destroyer or surface ship afloat and will be able to cruise submerged at speeds even greater than *Nautilus.*

Every projection on *Skipjack* has been eliminated except for her thin, dorsal-fin-like conning tower. Her round hull has a minimum of flat deck surface and her diving planes are built into the conning tower instead of the hull.

Skipjack's top speeds will be achieved by means of a single, five-bladed propeller. All other classes of the new nuclear boats, as well as all conventional submarines (except USS *Albacore,* AGSS 569) are driven by twin screws. *Skipjack's* single screw and hull are about the same design as those used in *Albacore,* the experimental high-speed diesel-battery-driven submarine, which was built solely for testing an advanced hydrodynamic design.

Although *Albacore's* actual speed has not been released, it has been said that owing to her tear-drop or whale-like design, she's the fastest conventional submarine ever built.

Skipjack is rapidly taking shape next to *Triton* at Groton, Conn. She's scheduled to join the Fleet within the next two years. Five additional high-speed single-screw nuclear-powered attack submarines are being built at Pascagoula, Miss., Newport News, Va., Portsmouth, N. H., and Mare Island, Calif. They include: **Scamp, SS(N) 558; Scorpion, SS(N) 589; Sculpin, SS(N) 590; Shark, SS(N) 591;** and **Snook, SS(N) 592.** A sixth high-speed fast attack nuclear sub, SS(N) 593, still unnamed, has been authorized, but her construction is being delayed to permit further refinements in her hull design and engineering plant.

These radically new atomic submarines will feature S5W reactors. The S5W reactor plant will be almost the same size as the reactor in *Nautilus,* but there the resemblance ends.

These ships are the units of our nuclear Navy. They are new, radically new. When they are put to sea, they will mark a new era in underseas warfare. In the past we have been attempting to fight a 3-D war with 2-D forces. Now things are different.

Nuclear Surface Ships

Up to this point, we've been dealing with the underseas arm of our nuclear Navy, but from all indications the surface units will be equally as great—or greater. Here's the current picture:

- ***CVA(N) 65***—This 85,000-ton nuclear-powered aircraft carrier authorized in the Navy's '58 Shipbuilding Program has been described as "the most exciting ship on the future horizon of our Navy." She will be the largest warship ever built.

With eight nuclear reactors of the pressurized water type, the gigantic carrier will be capable of cruising at high speeds. Her cruising range will equal many non-stop trips around the world without refueling.

Our first atomic carrier will take the "super" out of the 60,000-ton *Forrestal* class of supercarriers. Having no bunker oil needs, the atomic carrier will be capable of carrying a much greater amount of supplies and aviation fuel than *Forrestal,* thereby increasing the time it can conduct air operations before taking on aviation gas. In addition to the extra storage space, she'll have more flight deck and added hangar deck space.

Because of its nuclear power plant, the need for uptakes and stacks is eliminated and the island or superstructure arrangements can be more flexible.

- ***Long Beach,* CG(N) 9**—This will be the first nuclear-powered surface ship. With her keel scheduled to be laid at Quincy, Mass., in early 1958, the 700-foot, 14,000-ton guided missile cruiser is expected to join the Fleet by 1961. This ship is as revolutionary for her type as the new mobile airbase is for her type.

Conventional guns will be relegated to the past. All the major armament on *Long Beach* will be missiles, and will include both surface-to-air defensive varieties and surface-to-surface offensive types.

Her pressurized-water-type reactor plant will be approximately one-fourth the size of that used in the nuclear-powered aircraft carrier. She's estimated to cruise at over 30 knots.

The nucleus of *Long Beach's* crew has been training at Arco for the past year.

One of the salient advantages of this nuclear-powered guided missile cruiser will be a cruising range far greater than that of existing Fleet escort ships. She will feature excellent sea-keeping ability and with her newly developed guided missiles she'll provide maximum protection for Navy task forces against attack from air, surface or undersea weapons.

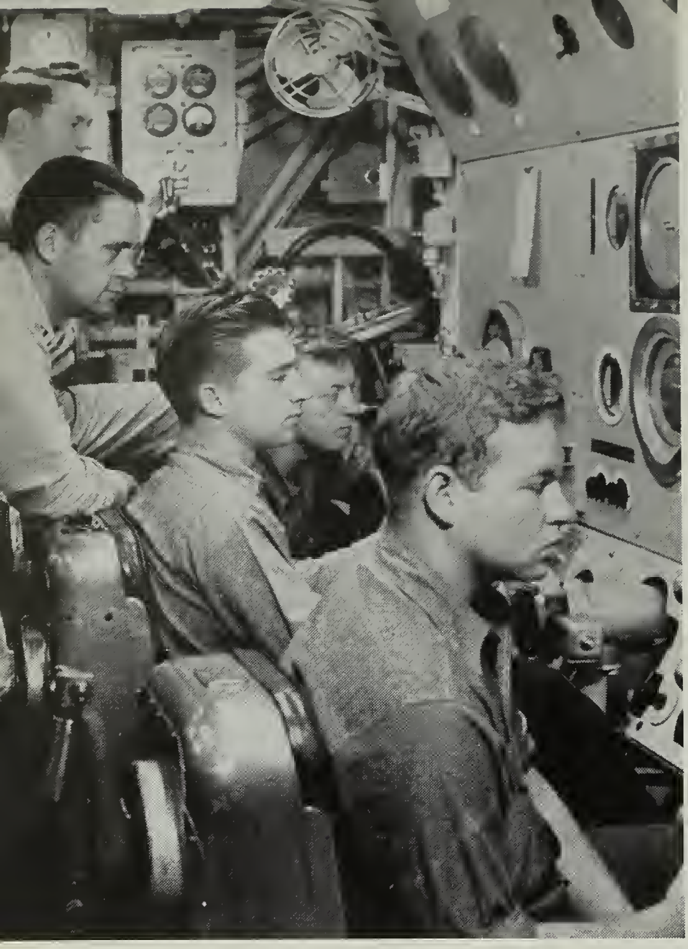
It is in the destroyer type ship, "the workhorse of the Navy," that nuclear power is most needed. No other fighting ship gains more in cruising range and operational flexibility from use of nuclear power than does the destroyer.

Instead of having destroyer operations limited by refueling at sea every few days, a nuclear destroyer can stay on the job.

Development of a destroyer nuclear propulsion plant is being pushed by the Navy and the Atomic Energy Commission. This development is going so well that the Navy hopes to include an atomic frigate in next year's shipbuilding program.

—H. George Baker, JOC, USN.

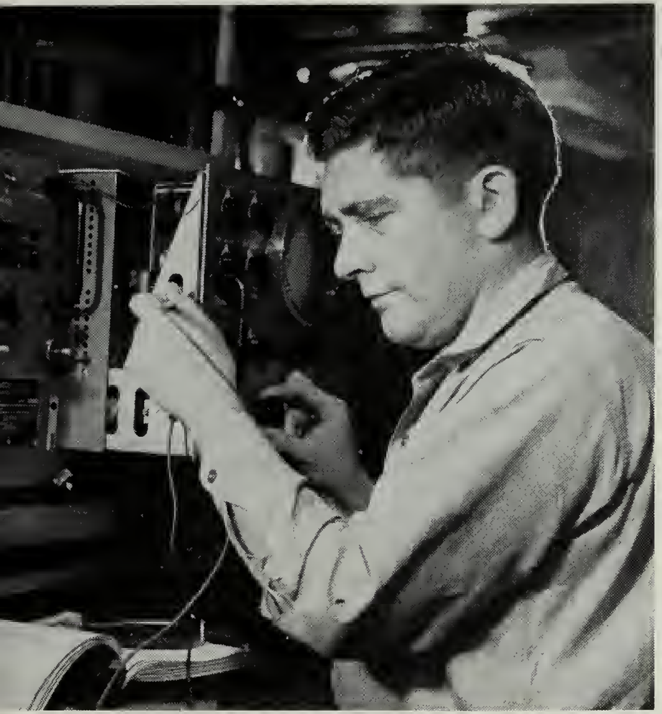
NUCLEAR SALTS—Control room of *USS Seawolf,* SS(N) 575, is manned by atom sailors. Navymen now study atomic power at Navy's Nuclear Schools.



These Men Sail Ou

THE WORLD'S FIRST nuclear propulsion sailors are now manning the first atomic submarines *USS Seawolf,* SS(N) 575, and *USS Nautilus,* SS(N) 571. In addition, many Navymen have already completed their first tour of atomic sea duty and have returned to shore with tales of performance that make old timers' hair stand on end. Other veterans of nuclear duty are busy training more Navymen in the techniques of atomic seamanship to man both surface and undersea ships that will soon join the fleet.

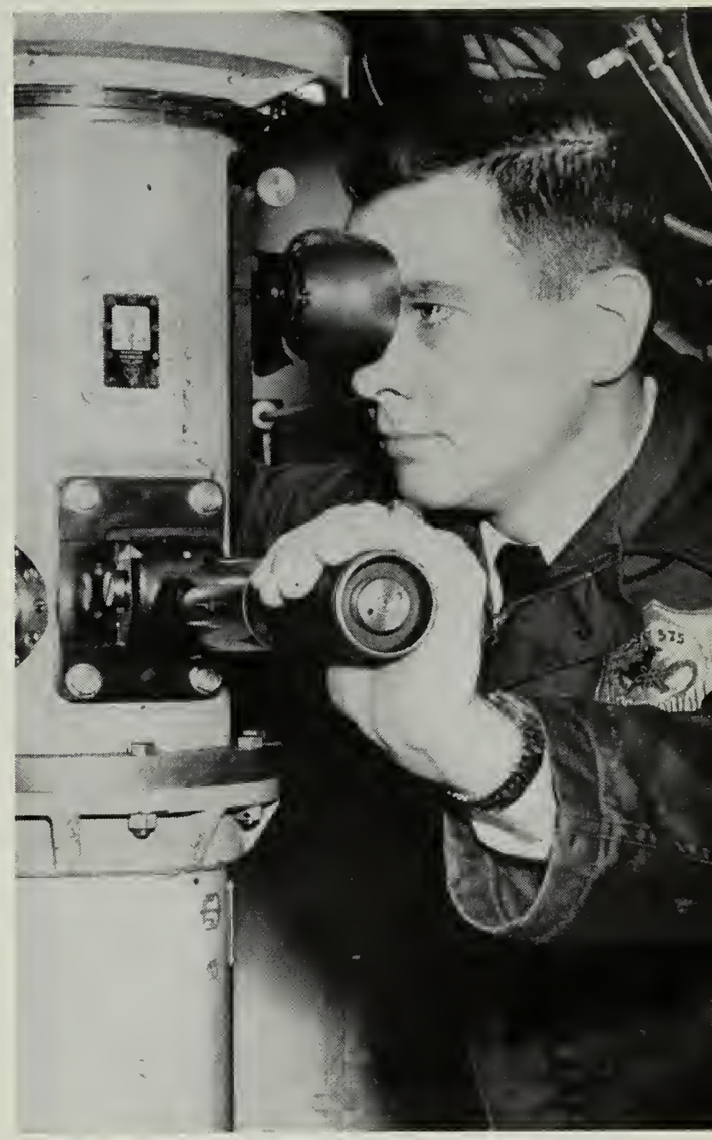
Here is a spread of pictures showing life on board

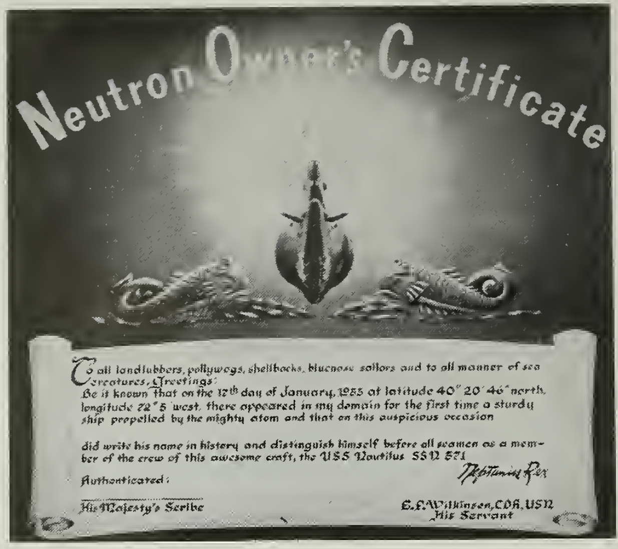


rst Atomic Ships

two operational sea-going units in the U.S. Navy's rapidly growing nuclear-powered Fleet.

Clockwise from top left: Atomic sailors man the controls of Navy's pioneer in nuclear propulsion, *USS Nautilus.* Yeoman Joe Aycock checks records on board Fleet's second A-sub, *USS Seawolf.* J. A. Carrie, ET2(SS) repairs electronic gear on *Nautilus.* LT Charles Orem scans with *Seawolf's* scope. *Nautilus* sailors take time from nuclear duty; G. W. Fields, TMCA(SS), reads while J. J. Owens, SD1, watches TV. C. T. Shaffer, SO1(SS) listen to music. Crew members watch movie while others take fantail swim.





Neutron Owner's Certificate

To all landlubbers, pollywogs, shellbacks, bluenose sailors and to all manner of sea creatures, Greetings:

Be it known that on the 17th day of January, 1955 at latitude 40° 20' 46" north, longitude 72° 5' west, there appeared in my domain for the first time a sturdy ship propelled by the mighty atom and that on this auspicious occasion

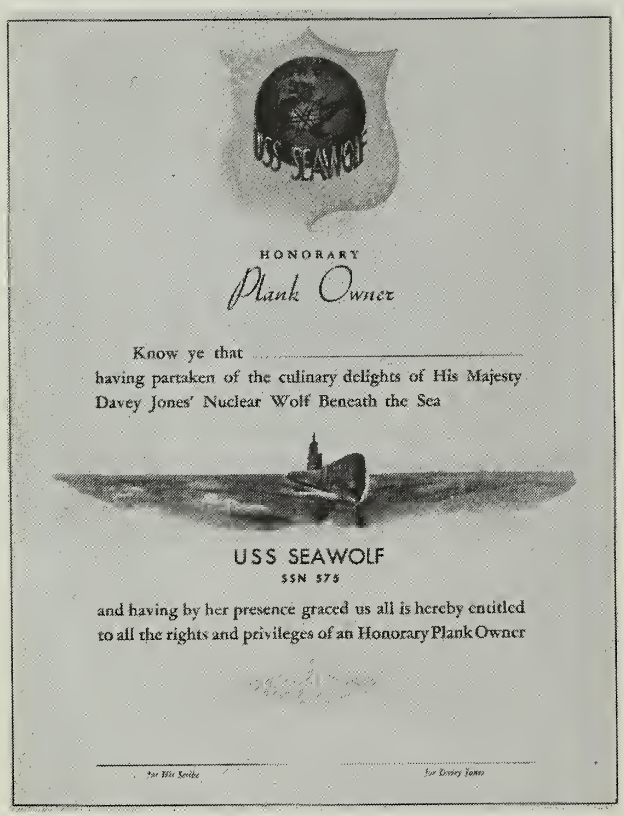
did write his name in history and distinguish himself before all seamen as a member of the crew of this awesome craft, the USS Nautilus SSN 571

Neptunus Rex

Authenticated:

His Majesty's Scribe

E. P. Wilkinson, CDR, USN
His Servant



USS SEAWOLF

HONORARY

Plank Owner

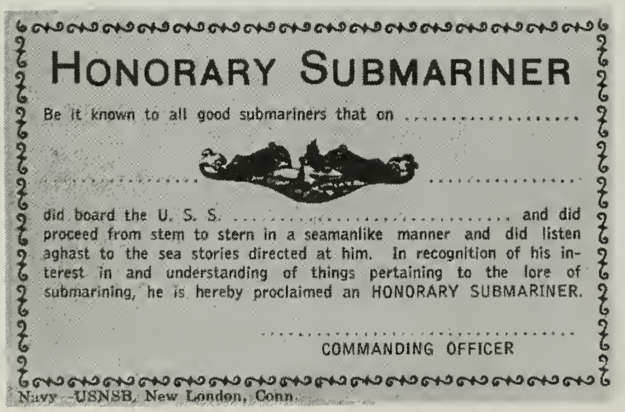
Know ye that ....

having partaken of the culinary delights of His Majesty Davey Jones' Nuclear Wolf Beneath the Sea

USS SEAWOLF

SSN 575

and having by her presence graced us all is hereby entitled to all the rights and privileges of an Honorary Plank Owner



HONORARY SUBMARINER

Be it known to all good submariners that on ....

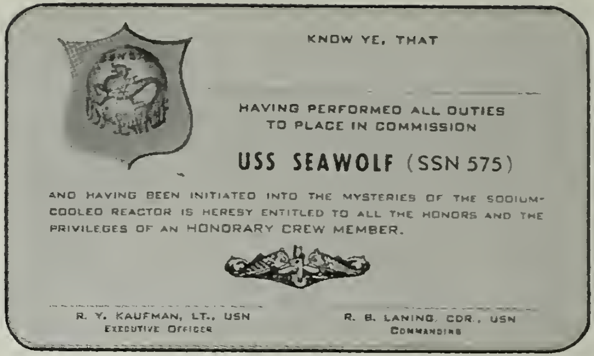
....

did board the U. S. S. .... and did proceed from stem to stern in a seamanlike manner and did listen aghast to the sea stories directed at him. In recognition of his interest in and understanding of things pertaining to the lore of submarining, he is hereby proclaimed an HONORARY SUBMARINER.

....

COMMANDING OFFICER

Navy—USNSB, New London, Conn.



KNOW YE, THAT

HAVING PERFORMED ALL DUTIES
TO PLACE IN COMMISSION

USS SEAWOLF (SSN 575)

AND HAVING BEEN INITIATED INTO THE MYSTERIES OF THE SODIUM-COOLED REACTOR IS HEREBY ENTITLED TO ALL THE HONORS AND THE PRIVILEGES OF AN HONORARY CREW MEMBER.

R. Y. KAUFMAN, LT., USN
EXECUTIVE OFFICER

R. B. LANING, CDR., USN
COMMANDING

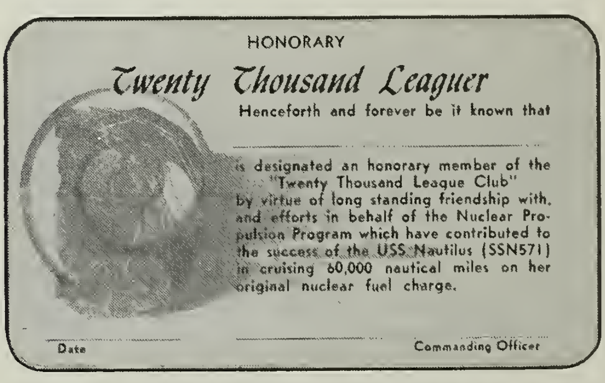
Atomic Submariners

If you're not assigned to the "Silent Service" but are fortunate enough to make a cruise aboard a submarine you're usually designated an "Honorary Submariner" by the commanding officer of the SS you visit. To go along with this title, individuals so honored are usually presented a colorful wallet-size certificate to prove that they have submerged in a sub.

Our nuclear subs are no exception. However, they go all-out in comparison to most conventional submarines. Instead of designating their visitors as just honorary submariners, USS *Nautilus,* SS(N) 571, proclaims them as "Atomic Submariner Extraordinary in the Order of the Nuclear Navy" or else "Twenty Thousand Leaguers."

USS *Seawolf,* SS(N) 575, our newest atomic submarine, bestows on its guests the title and privileges of an honorary crew member for "having been initiated into the mysteries of the sodium-cooled reactor."

In additon to the certificates presented to visitors, *Nautilus* and *Seawolf* do not fail to give proper recognition to their own crews. They present them with large Neutron Owner's Certificates and Deep Dive Diplomas.



HONORARY

Twenty Thousand Leaguer

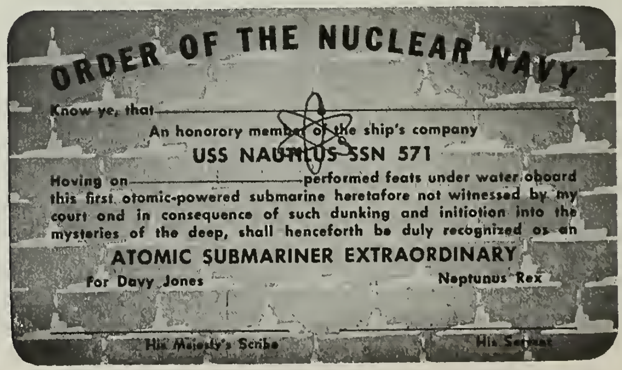
Henceforth and forever be it known that

....

is designated an honorary member of the "Twenty Thousand League Club" by virtue of long standing friendship with, and efforts in behalf of the Nuclear Propulsion Program which have contributed to the success of the USS Nautilus (SSN571) in cruising 60,000 nautical miles on her original nuclear fuel charge.

Date

Commanding Officer



ORDER OF THE NUCLEAR NAVY

Know ye, that ______________________________

An honorary member of the ship's company

USS NAUTILUS SSN 571

Having on ____________________ performed feats under water aboard this first atomic-powered submarine heretofore not witnessed by my court and in consequence of such dunking and initiation into the mysteries of the deep, shall henceforth be duly recognized as an

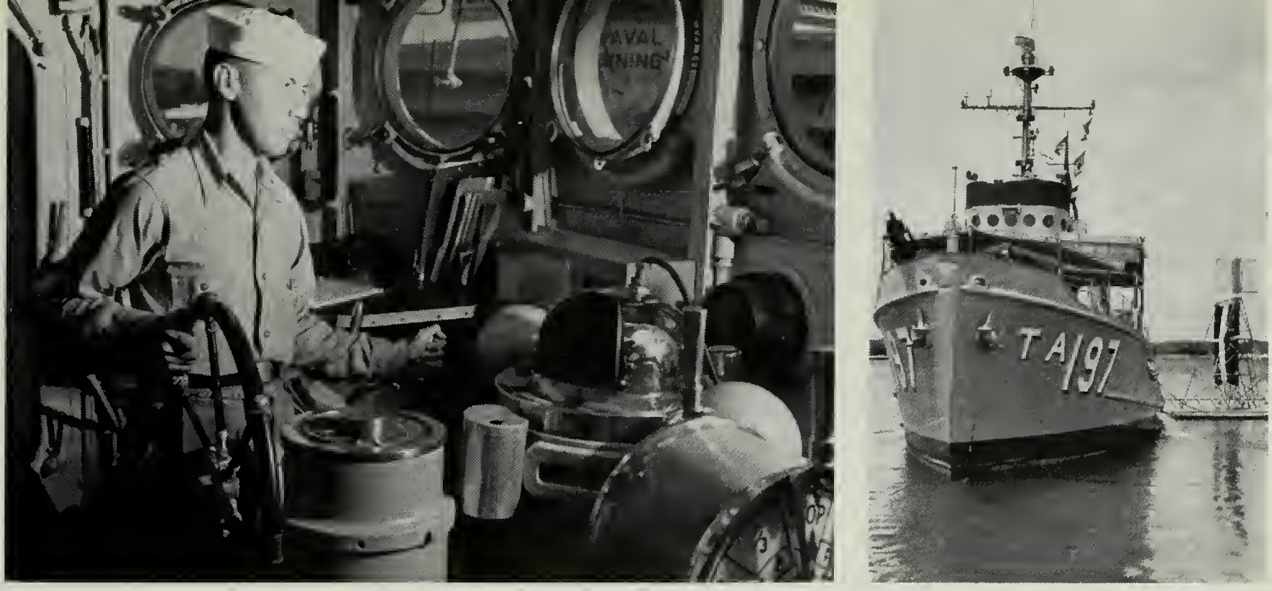
ATOMIC SUBMARINER EXTRAORDINARY

For Davy Jones

Neptunus Rex

His Majesty's Scribe

His Servant



RUDDER and engines are manned by Bob Wakefield, QM2. *Rt.* Tug and target.

Here's a Crew That Goes for Tugs

NUCLEAR submarines . . . supersonic aircraft . . . giant aircraft carriers that dwarf other ships on the Seven Seas are ready conversational material for every Navyman in this atomic age, often at the expense of the Fleet of service force ships that continue to do their job of supporting the combat forces.

One member of this force of sometimes forgotten ships, is the auxiliary ocean tug USS *Sunnadin* (ATA 197). Her power plant is a conventional diesel electric unit (not a nuclear reactor) and, for the technical minded, it develops about 1500 horsepower to push the 143-foot long hull through the water at a rated 13 knots which is definitely short of supersonic. Just like *Ranger,* she has a flight deck and catapult equipment, but *Sunnadin* launches target drones.

The term "tugs" immediately will bring to the uninitiated members of the Navy visions of brawny midget-size craft, puffing their way through harbor traffic, heaving and hauling on larger sisters or pulling a barge load of anything from gas to garbage. However, ships like *Sunnadin* head for deep water and the open seas to perform versatile services for combat units.

A tug's main job is towing, which the Pearl Harbor-based *Sunnadin* does most of the time. Most hauls are just for a few miles, but she can drag a load one-third of the way around the world nonstop if she must.

Towing cannot be termed glamorous, but it does require top-grade seamanship, fast thinking—and can be hazardous.

Take the time *Sunnadin* lost a towed target in a 15-foot sea with the wind blowing at nearly gale force.

She made four passes before getting alongside it, then hugged herself to the float while it drifted toward her stern. While *Sunnadin's* bridge gang maneuvered the ship to avoid a hull-penetrating collision, three crew members leaped onto the bobbing target to connect the towing wire.

By this time, the target had drifted too far away from the ship for their safe return. The three men made the five-hour rock-and-roll trip back to Pearl Harbor on the target float.

Often *Sunnadin* is called upon to tow ammunition barges out to sea to dump mines or cans of poison gas. "Floaters" that refuse to go down are punctured by rifle or machine-gun fire from the tug, sometimes with odd results. One time the radio circuits were filled with excited messages after an aviator sighted a great cloud of smoke near *Sunnadin* and thought the ship was in distress. The alarm was caused by *Sunnadin's* crew who, in sinking a smoke bomb, had filled it with holes, causing it to give off a cloud of smoke.

Sunnadin also acts as hare for the Fleet's "greyhounds." She steams on a prescribed course at a pre-set speed, making scheduled changes in both, while a destroyer over the horizon tracks her with radar. At day's end the tracking charts of both ships are compared to see how the warship's crew performed.

A small catapult is sometimes carried on *Sunnadin's* forecastle, which her crew refers to as the "flight deck." Small target drones are launched from the catapult and are controlled from the tug's bridge while accompanying ships try to shoot them down. If the drone averts the fire of sharp-eyed gunners, *Sunnadin* recovers it from the sea when its gas is gone.

Crewmen of the tug are as sharp as their ship, taking on any job assigned and doing it well. Radiomen and electronics technicians take their turn standing bridge watches, and since *Sunnadin* has a direct-control throttle, enginemen can stand watch topside rather than below, thus freeing bridge personnel who can do other sea jobs.

Working "out of rate" so to speak, makes *Sunnadin* crewmen well-rounded sailors and they learn more of a ship's workings than do men aboard larger craft. This develops ingenuity, as reflected when *Sunnadin* men built a ship's gangway for $100 after shipyard estimates for the job ran up to $2500.

Community projects of this sort have built a high pride in the crew of about 40 men who take *Sunnadin* to sea for assignments with the "New Navy" of the atomic age.

— Charles A. Coe, JO3, USN

It's All Done with Mirrors

NORMALLY CONSIDERED as an adjunct to vanity and/or illusion, mirrors are now helping Navy pilots to stay on the straight and narrow path.

A Mirror Landing System, which guides the pilot down a thin beam of light to a safe carrier deck landing, will soon be installed on all our angled deck carriers and shortly will be a fixture on the runways of 60 Naval Air Stations. The result of some nine years of Navy research, the system has been in use on various carriers for two years and, in that time, coupled with the angled deck, has reduced the number of carrier landing accidents by more than one third and has resulted in savings in the neighborhood of $20 million a year.

Briefly, the mirror reflects a beam of light toward the eyes of an approaching pilot, establishing a glide path which, if followed, will insure him a safe landing. To follow the glide path, the pilot simply maneuvers his plane so that a "meatball" of light reflected from the four yellow source-lights is centered in the four-foot square mirror.

If the pilot allows the meatball to drop toward the lower edge of the mirror he will fall below the ideal four-degree glide path and touch down just over the ramp end of the flight deck, catching the first or second arresting cable. Centering the light, the plane will catch wire No. 3 which is ideal. If the meatball rises to the top of the mirror the plane will hit far up the deck, engaging wire No. 4 or 5 or miss the arresting gear entirely.

When the pilot lets the ball of light wander off the top of the mirror he will more than likely overshoot and miss the arresting gear. With the meatball below the mirror he is going to undershoot and is a likely candidate for the spud locker.

Under the old system still used on straight deck carriers, the pilot made a "constant attitude" approach to the carrier, maintaining 100 feet of altitude during his final approach. As he turned toward the carrier stern the landing signal officer (LSO) guided him to a landing with directions given by the movement of hand paddles. The pilot had no more than three to four seconds to perfect his approach. That's not enough time for today's speedy jets as they approach the arresting gear at speeds exceeding 100 knots.

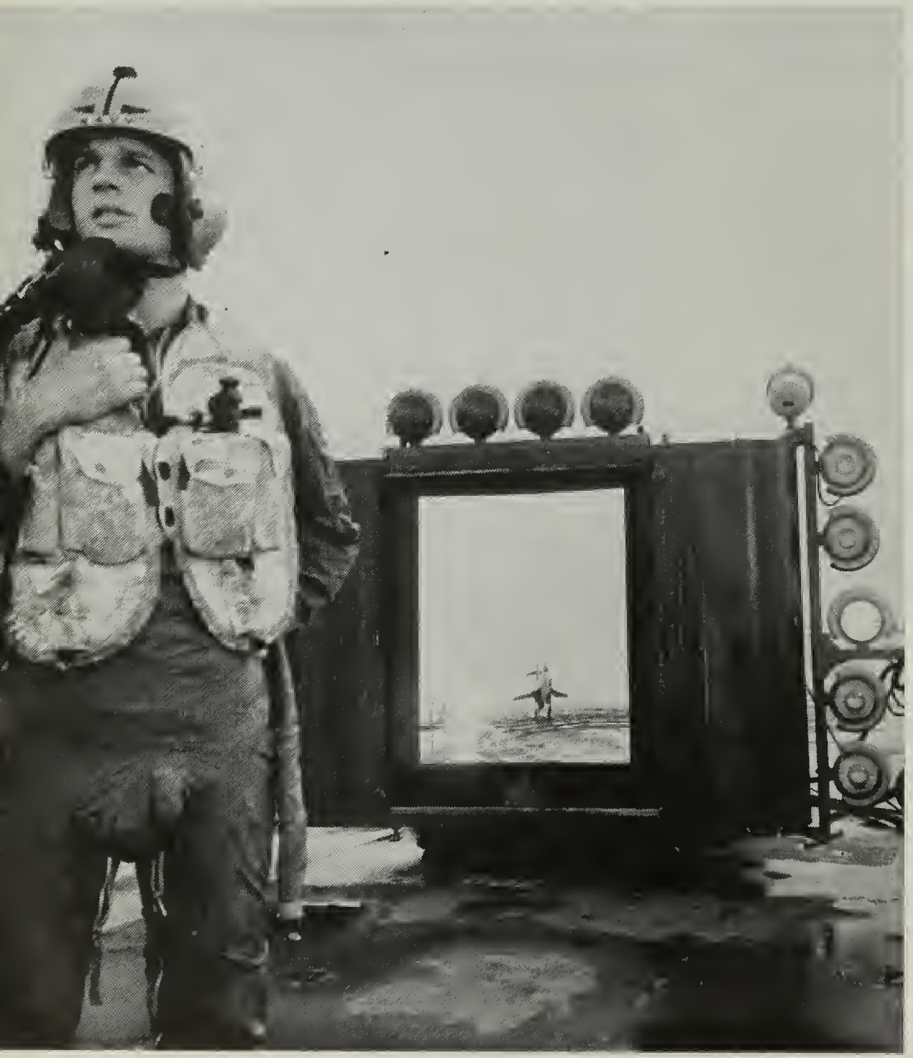
The mirror gives the pilot approximately 20 seconds to perfect his approach from the time he first sights the meatball and lines up with the center line of the landing area, until he touches down.

An example of how the system works in actual operation was demonstrated by a squadron aboard USS *Randolph* (CVA 15) on a recent Med cruise. The division of F2H-4 *Banshee* jet fighters broke up at night about 28 miles astern of the carrier while flying at 20,000 feet. They approached the ship at one-minute intervals, descending toward the 500-foot approach altitude Five miles from the ship they "dirtied-up" the plane (lowered landing gear, flaps and tail hook). At three miles they could see the runway lights on the flight deck and from there on in they were guided by the meatball and the deck center line lights.

The Carrier Air Group aboard the mirror-equipped *Randolph* did not suffer one landing accident during the entire six-month cruise. Normally, four or five would have occurred. This was credited to good flying on the part of the pilots, the angled deck and the Mirror Landing System.

This optical landing system does four things: it raises the landing pattern from 100 to 500 feet, short-

TOUCH DOWN—Navy pilot LT Verick stands in front of *USS Saratoga's* mirror landing system. Plane seen in mirror just landed with aid of 'meatball.'



HANDS OFF—Once the automatic landing system takes over, the pilot can sit back and let the plane land itself.

A Touch Down at Sea without Hands — It Can Be Done

"LOOK MA, *no hands,*" has become the cry of Navy pilots testing the new Automatic Carrier Landing System which allows "hands off the controls touch downs" in weather so bad that a conventional landing would be impossible.

Pilots on the aircraft carrier USS *Antietam* (CVS 36) have had to find other uses for their hands as an electronic brain guided their planes to safe landings on the angled deck ship. The test pilots could monitor their approach toward the carrier stern by watching the meatball reflection in the mirror, but the plane was being flown by an automatic pilot housed in the aircraft.

This "pilot" received its knowledge via a radio link transmitting the conclusions of an electronic computer on the carrier. The computer based its answers on raw material obtained by radar following the plane's approach, taking into account the yaw, pitch and roll of the carrier.

The mobile landing system, housed in two vans on the carrier deck, picks the approaching plane up on radar about two miles away from the ship. The antenna system of the radar keeps the beam locked on the inbound plane until it touches down or is given an electronic wave-off. If the aircraft is pushed up, down or to either side by air currents it is returned to the glide path by the computer-directed automatic pilot. If the ship yaws, thus changing the direction of the glide path, the corrections are ordered by the computer provided sufficient time remains. If not, the wave-off lights are flashed, the plane accelerates and moves into a climb to a predetermined altitude where the pilot resumes control.

Successful landings have been made with the system locking on to an aircraft one mile astern of the ship. It has also directed touch down approaches that began as far away as 10 miles.

More than 1500 shore landings were made with the Automatic Carrier Landing System before it was taken aboard ship for testing. Six different types of jets have responded to its signals along with large transports and light commercial planes.

When the Navy awarded the contract for the test model it specified that a controlled plane should touch down no more than 10 feet on either side of the landing area center line. During a carrier demonstration the test plane made nearly all of its landings in a 20-by-40-foot area.

An engineer who was proving the device to onlookers went so far as to adjust the equipment so the touch down would be three feet to the left of a previous landing. The plane, locked in the adjusted glide path by radar, hit the predicted spot.

The ability of the system to guide a plane to a safe landing even in zero-zero weather will greatly increase the value of carrier-based planes in combat. Missions will be cancelled only by seas so rough that flight deck operations are impossible. Another advantage of the system is its ability to guide an injured or exhausted pilot to a safe landing.

The Automatic Carrier Landing System is still experimental and has not yet been accepted by the Navy.

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ens the training period of an air group by one-fourth the normal time, prevents under- or overshooting, and permits a straight approach to the ship which is invaluable at night.

Raising the landing pattern to 500 feet reduces the strain on a pilot's nerves. Forced to rely on an altimeter that is affected by changing barometric pressure, a pilot flying at extremely low altitude has difficulty during daylight hours and especially so at night. At the higher altitude a pilot can concentrate on maneuvering his plane without fear of striking the water.

Also the 500-foot altitude and glide-angle approach is similar to that used for a field landing. A pilot, familiar with making his base leg at this height when approaching an air station, can qualify for carrier landings much faster than when using the LSO system of maintaining a constant attitude during the landing run.

The LSO system was determined inadequate when early jet planes were being tested in 1948. It was decided that a constant glide-path approach to the carrier was the best system to use for the faster planes, but a glide system was necessary. A prototype of the British mirror system using a metal reflector was adapted for American carrier operations and was installed in 1955 on the USS *Bennington* (CVA 20).

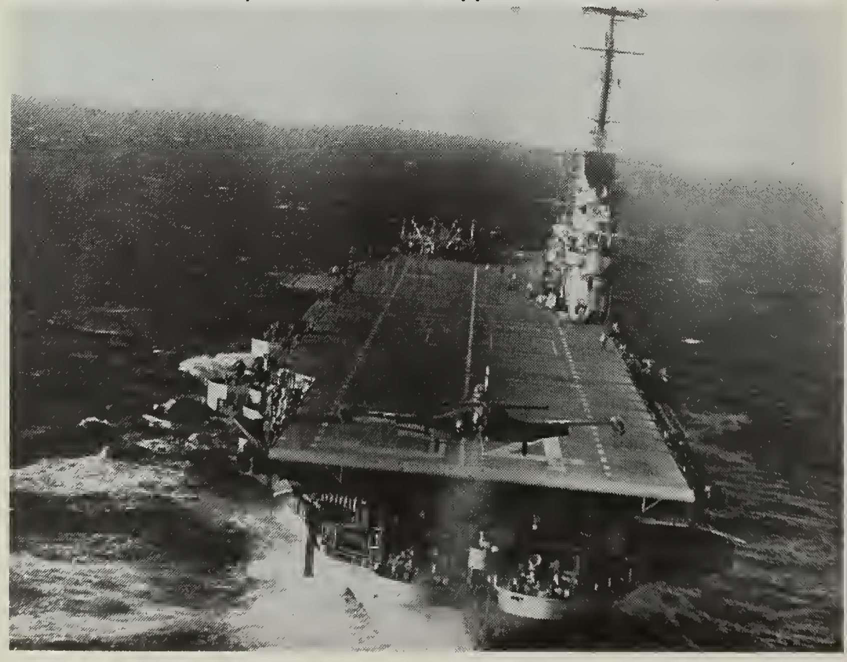
The theory behind the Mirror Landing System was proven to be correct and the Navy launched a search for the proper reflecting surface. Plastic, steel and aluminum were tested and failed. The meatball

MIRROR TRICK—The optically ground concave surface may reflect some wierd sights, but it is also credited with reducing landing accidents by one third.

appeared fuzzy or distorted, or in some cases spilled over the edge of the mirror. Finally a ⅜-inch piece of high quality plate glass, ground on both sides, was used. It was bent to the correct curvature and the concave surface further ground and polished to optical precision.

The mirror film (chromium alloy) was literally exploded on to the glass to a thickness of about six millionths of an inch. This mirror is of the "first surface" type with the reflecting substance on the face. (Home mirrors are normally of the "second surface" type with the reflecting substance on the back.)

OLD-FASHIONED carrier landing method required split-second timing by two men. Here a Navy F2H-2P *Banshee* approaches *USS Oriskany* (CVA 34).



The landing mirror is installed on the port side of the flight deck in a stabilizing frame that keeps the glide angle reasonably constant as the ship pitches. The horizontal center line of the mirror is indicated by a row of green lights on each side of the frame (datum lights) while red "wave-off" lights vertically line the sides of the mirror. If deck conditions are such that a landing cannot be accomplished, if something is wrong with the plane or its approach, the LSO who monitors the mirror's operation turns on the flashing red lights warning the pilot away. Also operated by the LSO are four green "prop cut" lights at the top of the frame which tell the pilot of a propeller-driven plane when to cut his engine.

The four brilliant source lights are installed approximately 160 feet aft of the mirror. They remain at a constant position while the mirror can be moved up and down to compensate for the varying height of the pilot's eye in different types of planes.

More than 100,000 carrier landings and 400,000 field landings have been made with the mirror, so the Navy knows just what it does. The angled deck plus mirror has already reduced the carrier landing accident rate from 30 to eight per 10,000 touchdowns, a saving of 300 accidents per year and about $50 million. During one recent three-month period the rate dropped to five accidents per 10,000 landings.

Destined for all Navy runways in the near future, the mirror will bring about a 50 per cent reduction in accidents, according to the prediction of authorities.

The Mirror Landing System is still not the best system possible. It does not take into account speed or the horizontal position of the aircraft, but it is saving lives while the research for improvements goes on.

An automatic carrier landing system has successfully completed land trials and is undergoing carrier tests (see page 13). But until this system or another is accepted by the Navy, the Mirror Landing System will continue to save lives and dollars on Navy carriers. Coupled with the angled deck carriers, it has brought about a radical change in ship-based flight operations.

William Prosser, JOC, USN.

EASY DOES IT — Mine student is shown mine assembly.

Handle With Care

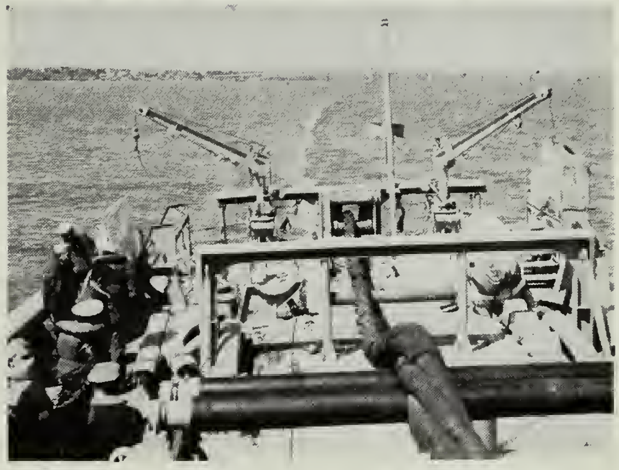
If you come by the jitters easily or have ever acquired the handle "butter fingers" here's a Navy school that you probably would not want to consider.

However, for those who are nimble of mind and fingers the Mine Warfare Schools at Yorktown, Va., offer training for officers and enlisted men in all phases of offensive and defensive mine warfare. Although they receive little publicity, these Navymen are learning a skill that is of utmost importance to the Fleet. Their studies range from the basic course in the Class A Mineman School to one in Minesweeping and Minelaying.

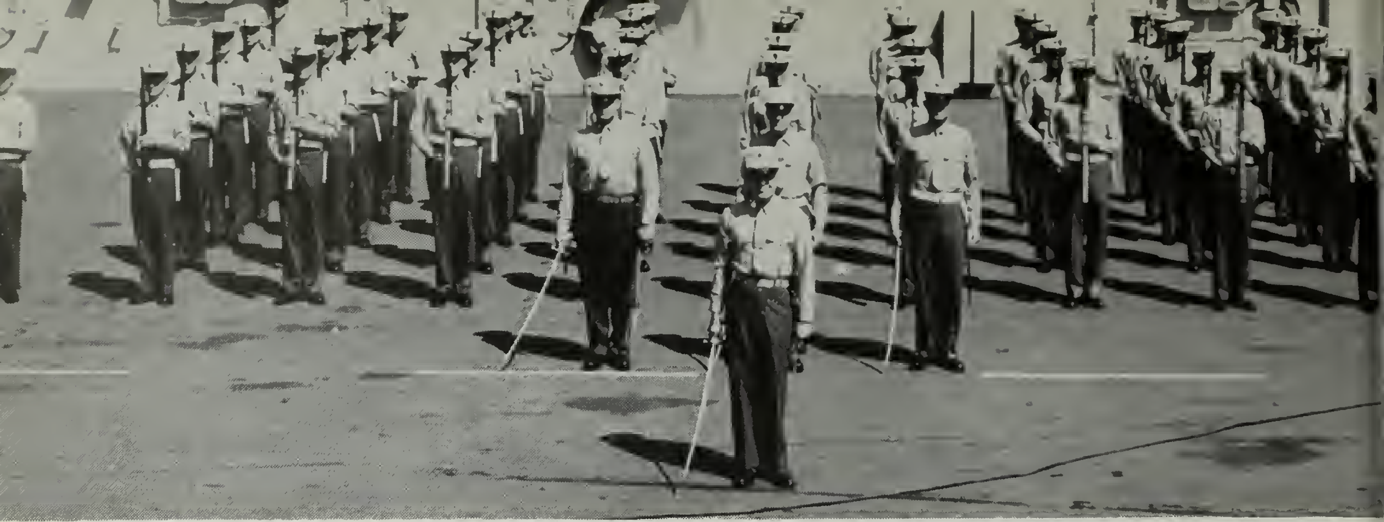
Future minemen at Yorktown are taught by doing. Actually working with mines and mockups, coordinated with classroom work on theory and basic functions, soon makes learning about the Navy mines with their highly complicated machinery and electronic circuits an interesting challenge.

The mineman's business is tough and tricky. If you are interested in finding out more about this school and the work Navy minemen are doing in the Fleet take a look at the February 1957 All Hands.

ALL MINE—Yorktown students receive lab instructions on moored mines. *Below:* Class session explains structure.



MODEL STUDENTS — Future minemen watch sweeps clear magnetic field. *Above:* They set to sea to try it firsthand.



SCABBARD AND BLADE — A Marine detachment on board the USS *Franklin D. Roosevelt* (CVA 42) presents arms.

They Go to Sea — But They'r

This month, as the Marine Corps celebrates its 182nd anniversary, Navymen all over the world salute the men with whom they serve ashore and afloat, the "sea-soldiers."

According to the cruise book of USS *Lexington* (CVA 16) the Leathernecks in that ship's Marine detachment secretly believe that the man who really runs the ship is the Marine who serves as the Captain's Orderly. As evidence, they point to the fact that whenever something big and mysterious is going on the skipper calls for that individual — obviously to seek his advice.

Navymen (including *Lexington's* skipper) are likely to disagree with this version of the orderly's duties. And, there may possibly be a few Marines who don't actually believe that the orderly is the man behind the throne. However, even though sailors and Marines have both been serving at sea for a few thousand years, to some Navymen the duties of a seagoing Marine detachment are just about as mysterious as the reasons behind many of the calls for the Captain's Orderly.

Nowadays, except for Marine communications personnel on a few amphibious command ships, Leatherneck detachments regularly serve only in cruisers and large aircraft carriers. But, there was a time when every warship carried Marines or their counterparts. As far back as 1500 B.C. "fighting men" on the order of latter-day Marines were carried in Phoenecian vessels. Their job was to engage enemy ships in close-quarter fighting and to head landing parties. In ancient Greece the Epibatai, and in Rome, the Classiarii, performed similar functions.

SEA SCHOOL—Two gunner's mates, members of USS *Yorktown's* (CVA 10) landing party, receive 30 cal. machine gun instruction from Marine shipmate.

The practice continued down through the ages and in 1664 Great Britain organized its Marine Corps—originally known as the "Duke of York and Albany's Regiment of Foot." This was a unit of 1200 "land souldgers prepared for sea service."

The first two battalions of American Marines were authorized 182 years ago this month — in a resolution adopted by the Continental Congress on 10 Nov 1775. The resolution specified that the men recruited for this embryo Marine Corps should be "good seamen, or so acquainted with maritime affairs as to be able to serve to advantage by sea." Practically ever since then shipboard Marine detachments have been doing just that.

Since the American Marines were patterned after their British cousins, the three main specialties of the Continental Marines were to be about the same as those of the British "seagoing soldiers." In ship-to-ship combat they were to serve in boarding parties and supply men armed with muskets and grenades to fire on

MARINES

BROW SENTRY—Seagoing Marines make up the ceremonial guard, man antiaircraft batteries, act as guards and fill orderly and gangway sentry billets.

the enemy from decks and tops (platforms on the masts). In ship-to-shore action they were to be the nucleus of the landing party. And, when not engaged in these activities, their chief function was to prevent mutinies and in general, keep the sailors in line.

Naturally, the latter didn't endear the Marines to the men in a ship's crew, but before long, even the most bitter sailor had to admit that the Marines did do a pretty good job in combat. For instance, when John Paul Jones said "I have not yet begun to fight," (during the battle between *Bon Homme Richard* and the British *Serapis*), a grenade dropped into the hatch of the British ship by a Marine was one of the many valorous deeds by his crew that put teeth into those defiant words.

For 50 years or so following the Revolution the duties of a seagoing Marine detachment remained about the same as they had been in the Continental Navy. After that, with the advent of steam propulsion and long range guns, and the realization that American Navymen weren't the type to go in for mutinies, the Marines' duties began to take on their present-day form.

However, the primary function of a modern detachment, even on a guided missile cruiser, is a job which Marines have been doing ever since the days of the Phoenecians. According to *Navy Regulations* this is:

"To provide a unit organized, trained and equipped for operations ashore, as part of the ship's landing force; as part of a landing force of Marines from ships of a fleet or subdivision thereof; or as an independent force for limited operations."

As you probably know, most of the Marines' landings in World War II and Korea were made by units of thousands of men carried to battle in transports and LSTs—not by detachments regularly assigned to ships' companies.

However, this doesn't necessarily mean that the small landing party is a thing of the past. For example, when the lives and property of American citizens are in danger in foreign countries in peacetime, the landing party can still be a very effective means of protecting them. In this respect, the seagoing Marine detachment is something like a fire department—you may not need it every day, but when you do, it really is a handy unit to have on deck.

To make sure they'll be ready if a "fire" should break out, Marines at sea are given plenty of physical exercise, rifle practice and training in the various other skills that they may be called upon to use in such a situation. And, when a cruiser or carrier hits port and the liberty parties go ashore you'll often see the Marines head for the beach on business, instead of pleasure. There, they do postgraduate work in hiking, infantry tactics, amphibious warfare and the like.

Next to landing operations, the most important combat function of today's shipboard Marines is, "To

FAMILY PORTRAIT — Seagoing Marines 1888-style look as though they mean business on board old *USS Boston*.

SHIPSHAPE—Marines at sea take time out from their shipboard duties to limber up and keep in shape with a session of physical exercise on deck.

provide gun crews." So, the Leathernecks also get their share of practice on the antiaircraft guns which they usually man.

Their third function, says *Navy Regs,* is "To provide internal security for the ship." And, in addition, "Marines may be detailed to other duties afloat, including but not limited to communications, staff, liaison, guard and aviation duty."

There's a lot of work to be done under these headings. For example, the Marines stand brow watches in port, screening visitors and seeing to it that unauthorized persons don't use the forward gangway. They get their share of compartment cleaning and the handling of ammunition and provisions. They guard the brig and such areas as the hangar decks for guided missiles. They furnish prison chasers, bank guards for the ship's disbursing officer, shark guards during swimming parties and special sentries whenever they are needed. They also provide orderlies for flag officers, the captain of the ship and, if the detachment's commitments permit, for the executive officer and any embarked senior Navy or Marine officer in command who is not a member of the ship's company.

A seagoing detachment is often called "the ship's guard," and one of its important duties is to render honors as prescribed in *Navy Regs.* For this assignment "spit and polish" isn't just a slang expression—it's a way of life to the seagoing Marine.

The "guard of the day," from which routine guard details are provided, stands by in prescribed uniform between Morning and Evening Colors so that it can turn out at a moment's notice to render honors to important visitors. In addition, it ordinarily parades for an informal guard mount and for Morning and Evening Colors when the ship is in port.

When you consider the size of a typical detachment (two officers and 65 EMs on a carrier and two officers and 40 EMs on a cruiser) and the duties which these men have to perform, you begin to realize that the life of a seagoing Marine can be just as busy as the life of a Navyman.

Officially, the detachment is a part of the gunnery (or deck) department. The detachment CO is usually a captain and his assistant is normally a lieutenant. Although the CO is not a department head, he occupies a somewhat similar position with respect to the administration of Marine Corps matters. He is also one of the division officers of the gunnery department.

The "rank and file" of the unit is made up of hand-picked young volunteers who've been assigned to the detachment straight from Sea School at either Portsmouth, Va., or San Diego, Calif. (See ALL HANDS for May 1956). During his four weeks at the school the Marine has been salted down with courses in such subjects as seamanship, gunnery, guard duty and shipboard lingo. Before entering the school he has been individually interviewed, screened and given every chance to back out of the training, which is even more intensive than that given in boot camp or combat infantry school.

Once he's assigned to a seagoing detachment the Marine normally stays in it for a two-year hitch, during which he must keep up the high standards that led to his selection.

Perhaps because of this careful selection, Navymen and Marines now get along with each other a lot better than they did in past years — even if the Marines do jest that their orderly runs USS *Lexington.*

'RIFLE, TRIGGER, OVER'—Marine personnel attached to ships and assigned to units ashore study communications techniques. Shown here is mobile radio.

PORTUGUESE craft shares sunset with CVA 42. *Below: FDR's* chaplain says Mass at Shrine of Our Lady of Fatima.

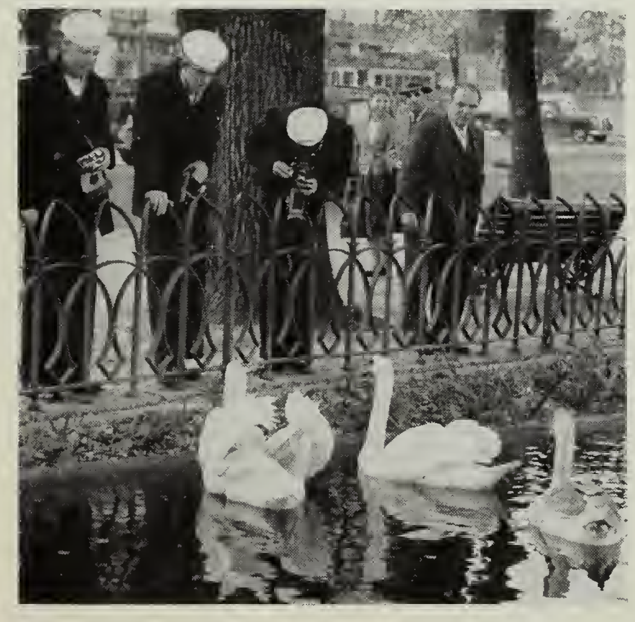
Stopover in Lisbon

THE WORD was passed to knock off all ship's work and make ready for a four-day stopover in Lisbon, Portugal. This welcome break came to sailors of a hard working group of ships of a task force in the Eastern Atlantic.

The Navymen found relaxation and Old-World pleasure in the native foods, beautiful countryside, clean streets and charming companionship of the Portuguese capital. Churches and homes unique for their use of pastel colors and impressive murals were a cameraman's delight.

Included in the liberty itinerary was a visit to the shrine of Our Lady of Fatima 70 miles from Lisbon. This is one of the many points of interest and few travelers ever miss it.

SOMETHING FISHY—Fresh catch attracts interest in fish market. *Left:* Cameras snap on Avenida De Liberdade.



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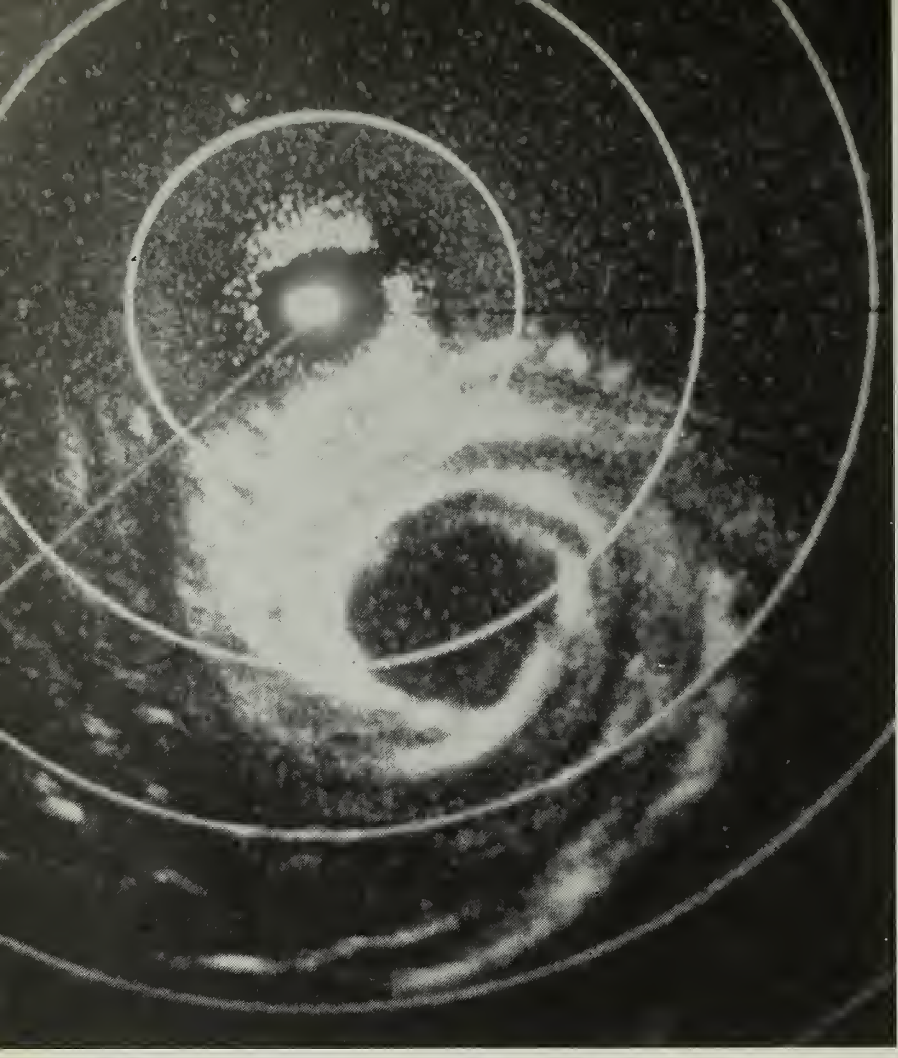


UNPREDICTABLE LADY — A radarscope picture of a hurricane shows the counterclockwise movement of air around the calm center of the storm.

EACH YEAR between May and December giant rotary air masses roar out of the tropical doldrums or equatorial belt of calms in the North Atlantic bringing havoc to the Eastern seaboard and sending the frail ships of men scurrying for safety in sheltered harbors.

Clouds rise in this storm higher than many planes fly. Winds blow steadily at speeds reaching 125 knots, but gusts of nearly 200 knots occur. Waves build into mountains and then the wind tears their tops off, sending sheets of water hurtling through the air to tear at puny man-made objects. This is a HURRICANE.

These tropical cyclones as they are called by weather experts, are known by many names. In the China Sea they are *typhoons*. In Senegal they are *tornadoes* and off the Cape of Good Hope they are called *trovados*. On the West Coast of Central America the storms are referred to as *papagallos,* while in the Philippines they are called *baguios*. But no matter what name is applied to the whirling mass of wind, it means death and destruction brought about by a force estimated to be equal to two and one-half World War II-type atomic bombs exploding every second.

It is difficult to describe the characteristics of hurricanes, for they are as changeable and unpredictable as the women for whom they are named. One may charge to the west and strike the coast of Florida; another may drift slowly northward stopping for long periods of time, then come ashore in the Cape Hatteras-Norfolk area. A third storm center may stay far out at sea where it will turn to the northeast and blow itself out in the North Atlantic. This occurred during the 1955 hurricane season and to a greater extent during the 1956 season.

The season when the tropical storms can be expected to brew in the steaming tropics extends from May to December. September is considered to be the top month for hurricanes, followed by October and August.

Between 1887 and the present nearly 550 tropical storms were recorded in the Atlantic. More than half turned into full scale hurricanes such as the disastrous "Audrey," the first of the 1957 season. "Audrey" was born in the southern area of the Gulf of Mexico and roared almost due north to strike the coast of Louisiana with tremendous force.

Many perished in the storm and property damage ran into millions, but the losses could have been much greater if the Joint Hurricane Warning Service had not been in operation. Radar was used to track the storm when it developed. Navy planes penetrated the storm cell to gain information concerning the force it contained. These facts were used to develop forecasts and warnings concerning the hurricane's path and undoubtedly saved many lives.

But, owing to the changeable nature of the tremendous storms, the hurricane warning flags sometimes hang limp after the Fleet has steamed for sea or sought shelter in hurricane anchorages and after hundreds of planes have flown to safety. The hurricane has passed by far out at sea, forced there by a lifesaving wind current. However, the storm could just as easily have roared ashore pushing ships aground, snapping heavy mooring lines and tearing aircraft from their tie-downs.

A typical storm that could cause such damage developed far out in the Atlantic where a disturbance occurred in the prevailing easterly wind current. One strand of the undulating wind system, blowing from east to west, tumbled from its course and began to circle to the south. Soon it was joined in the counterclockwise rotation by other winds causing the formation of a low pressure area.

A ship passing across this area would have noticed an unsteady and possibly falling barometer and, when it reached its lowest point, an increase in temperature. The sky could have been cloudless, but in a grow-

For These Ladies of the Sea

ing storm the clouds would begin to mount, and more and more air would flow into the center of the system and rise through the “eye” of the storm to the top of the disturbance, then it would flow out in all directions.

By the time our typical storm had become an adult (life expectancy about nine days) it would cover a circular or oval area, some 300 miles in diameter. The winds near the eye would climb to more than 100 knots and slack off at the outer edges to about 40 knots. The entire cell would move northwest toward the coast at a speed of about 10 knots.

Now suppose you are in a similar storm. On board your ship somewhere in its path, things have been normal with an average amount of wind and sea action, but the skipper has been informed of the storm’s movements by situation reports sent out by the U. S. Fleet Hurricane Forecast Facility, Miami, Fla., every six hours. These reports give the position, force and anticipated movement of the hurricane. After the storm path has developed the captain takes the necessary action to insure the safety of the ship.

If possible he runs for cover, leaving a clear and unoccupied sea for the storm to tear to pieces, but if orders dictate, he might stay on station until the last minute. During this period a drop of .10 inch of barometric pressure in a three-hour period may have been noticed. Cirrus clouds (very light and delicate) are replaced by heavier types at lower levels. Soon a bank of dark gray clouds appears on the horizon, and the wind becomes gusty. Facing the storm the wind will strike your left side.

An unsteady barometer consistently falling will be logged on the bridge and the deck force will be rigging for heavy running as the clouds become darker and cover the entire sky. The ship will roll and pitch as a heavy cross sea develops and rain and wind will increase as the storm draws nearer.

All of these signs will have been noted by the captain of your ship and even if he does not receive the weather warnings he will have a good idea of where the storm center is by applying the law of “Buys Ballot,” a Dutch physicist. (In 1850 Buys Ballott observed that with his back to the wind the low pressure center of the storm was to the left and the higher pressure to the right.) Actually the center may lie as far as 30 to 40 degrees ahead of the left.

By this time the waves will be climbing toward 50 feet and the winds blowing at hurricane force (more than 64 knots). From observations the skipper of your ship has learned that he is steaming along the track of the storm. To the left of the storm’s path is the navigable semicircle and to the right is the dangerous semicircle where the wind and the sea will force him constantly toward the center of the storm. The winds will be higher in this segment of the hurricane for they have the added force of the storm’s forward motion, possibly as high as 30 knots.

With plenty of sea room available the captain has already changed course (to bring the wind onto the starboard quarter) and started running. The winds will slowly shift ahead and the ship will be headed into the navigable semicircle making good her escape from the storm center.

If the skipper’s observations convince him he is in the dangerous semicircle he will try to put the wind on the starboard bow and make as much headway as possible or if in the confused seas near the eye, he may elect to heave to.

Take the following case as another example. The skipper is a veteran of many tropical storms. He averaged two typhoons a year between 1948 and 1954. His knowhow was gained not only in fighting the storms, but also through using passive resistance against their force.

His first experience in offering passive resistance came about by accident. Commanding a cargo ship caught in a Caribbean hurricane, he had put the loaded ship on a course for the navigable semicircle of the storm when the vessel lost all power. To the surprise of all hands the ship ceased to work so hard in the heavy sea and the action of waves and wind decreased as the vessel lay dead in the water. The center of the storm passed directly overhead and the winds resumed, but the ship escaped all damage except that received while trying to make headway.

He used the same method to ride out “Typhoon Ruth” in 1951, one of the most destructive storms to hit

NAVY HURRICANE HUNTERS observe storms, collect data, and pass this information on to weather centers who in turn warn all the ships at sea.

DANGEROUS HUNT — Pilot and plane commander checks his instruments on board the *Neptune* while on a hurricane-hunting mission over the ocean.

Okinawa. Leaving Naha Harbor late one afternoon as "Ruth" advanced toward the island he steamed his ship, a 4500-ton AP into the shelter of a small island 50 miles to the west. He stayed near the island for about 25 hours before abandoning the shelter and, with engines stopped, drifted with the storm to the east.

He estimated the wind at 140 knots and the wave height at 50 feet when the eye of the storm passed about 25 miles to the east. He indicated that there was no sea breaking on the deck, no jars or shocks and no damage—even though the transport drifted through the worst part of the storm.

This unique method is one of the paths open, under certain conditions, to a commanding officer if his ship is caught by a tropical storm that reaches hurricane proportions. The same methods a skipper would use in the North Atlantic would apply in the Southern Hemisphere, but in reverse. (For a detailed account of the passive resistance technique, see the MSTS Magazine, October 1955, published by the Military Sea Transportation Service, Navy Department.)

In the old days and in times not so long ago, a ship's skipper moving into a hurricane area had a big problem in that he might be sailing blindly into a danger spot. Today, a commanding officer would not be in the dark about a storm's location except possibly under combat conditions.

The location of storms is well plotted by the Joint Hurricane Warning Service, a combined effort of the Weather Bureau, Navy, Air Force and the Civil Aeronautics Administration. During 1956 each hurricane was followed by several of the 50 radar installations set up for this purpose. More of these electronic aids are being installed.

At a typical base, warnings were received telling of the path of an approaching hurricane. Hurricane Condition Three was set, indicating that the storm was 72 hours away. During Condition Two, a fly away was ordered and all aircraft that could get into the air left for bases out of reach of the hurricane. The harbor was busy as Fleet units headed for the open sea to give wide berth to the storm, or steamed to selected safe anchorages in a nearby bay. The ships that couldn't move to sea put over all the hawsers and cables they could muster to the bollards and bits on the dock. Even the anchor chain was snaked out and shackled to a heavy support some distance away. Harbor tugs moved into the sheltered side of the piers to stand by for emergencies.

All was in readiness shortly after the 24-hour warning came—Hurricane Condition One. Doors exposed to the water were sandbagged. Fuel trucks were lashed down on the air station parking area and emergency crews were standing by.

When the storm hit it was with all of its strength. Quonset huts strained against the cables that held them down. Sheets of rain blew against doors and windows, penetrating the tightest seals. After the eye of the hurricane passed, an unusually high tide driven before the 100-knot wind swept against the seawall spraying salt water over buildings and equipment. As the torrential rains began to ebb and the incessant lightning moved on, the base personnel began to check for damage. Again an early warning had kept the destruction of the storm to a minimum.

Responsible for tracking the storm and obtaining warning information about the forces contained in the advancing storm are "hurricane hunters." Navy flight crews assigned to this task take their four-engined *Super Constellations*, twin-engined P2V *Neptunes* and even F2H *Banshee* photo planes into the storm itself.

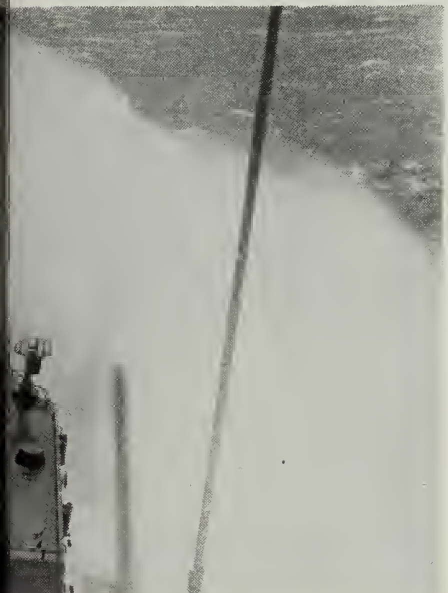
These planes make daily reconnaissance flights, searching for tropical storms still in their early hours of life. The "hurricane hunters" know the moment the storm reaches hurricane proportions, and keep military and civilian meteorological services advised as to its force and direction of movement.

They enter the storm so that the coastal area will have adequate warning and, in the interest of science, bring back instrument readings, observations and photographs that are examined by scientists trying to determine the cause of hurricanes and by weather experts who will issue forecasts and warnings.

Such missions are assigned to Airborne Early Warning Squadron Four (VW 4) operating out of the Naval Air Station, Jacksonville, Fla., as part of the Joint Hurricane Warning Service. Also flying hurricane missions is Light Photographic Squadron 62 (VFP 62).

According to the Hurricane Warning Service Agreement, the Navy air units are responsible for the Gulf of Mexico, and the Caribbean Sea, and work with the Air Force in a joint area that extends south from New York along the East Coast to Florida and then southeast to Puerto Rico.

The single-place jet photo planes fly into the storms taking high-altitude photographs. The four-engined *Constellations* make high-altitude flights into the eye of the storm to track its position or skirt the edges keeping track of the hurricane by radar. The low-level flights are made by the *Neptunes* often at altitudes as low as 500 feet. At this level aerologists can observe sea conditions and determine the low-level speed of the winds inside the storm.



A flight in any one of these planes will begin in sunny Florida, but within hours the planes will be battling winds well over 100 knots and fighting wing-breaking turbulence. At high altitudes, lightning may riddle the plane with small holes.

Entrance into the storm is made at a point where wind conditions will give the smoothest flight (smooth is hardly the word to describe a trip similar to a roller coaster ride on a rough track in a wind tunnel with cold water pouring down your neck). Staying roughly parallel to the winds the plane penetrates to the eye of the storm. This calm area where the blue sky shows through the cloud cover, is about 14 miles in diameter. A few minutes of rest, observations, instrument readings and a cup of hot coffee and the flight out begins.

On this type of flight the *Neptune* will carry a crew of 11 while the larger *Constellation* will have a crew of 25 officers and men. The former can stay in flight for 14 hours, using, inside the storm, its two auxiliary jet power plants to aid the straining propellor engines. The "Connie" can make 18-hour tracking flights.

This year scientists hope to fire high-altitude rockets from a land base on the central east coast into various quadrants of a hurricane. The rocket will carry camera equipment that will make continuous photographs from high above the storm. The rocket will later be picked up at sea.

Another photographic project is a high-level balloon which would take time-lapse photographs from high above the storm. The balloon will be released in the path of an approaching hurricane and its altitude and direction controlled from the ground by dropping ballast by remote control. Different wind directions at various altitudes would be used to spot the balloon over the storm, the camera equipment would go into operation and the film recovered after the storm has passed.

Still another research method will be radar photography of hurricanes. VW-4 hopes to study one storm by air-borne radar photographs from its inception to decay. To do this the squadron will keep a series of planes on station around the clock for days.

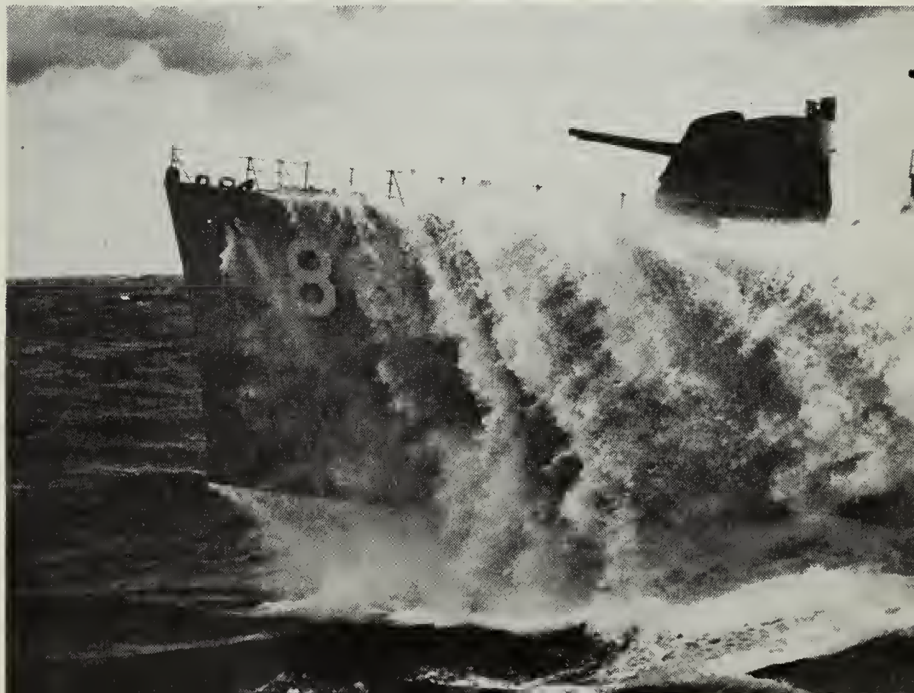
Information gathered from Navy and Air Force "hurricane hunters," from military and civilian ships and island stations are used by the joint service to issue hurricane advisories and warnings.

The effectiveness of this service has been recorded in human lives. At one time 400 people lost their lives for every $10 million worth of damage. That figure has been reduced to about two to four lives for the same amount of damage.

For men "who go down to the sea in ships" any information that can be learned about hurricanes will be invaluable in safeguarding their lives. But until all is known about these vicious storms, the only safeguards for a sailor at sea are adequate warning and good seamanship.

—William Prosser, JOC, USN.

100-KNOT WINDS of hurricane-type storms push giant, hard hitting waves over ships, making navigation tricky and dangerous even for the saltiest.



LETTERS TO THE EDITOR

Enlisted Performance Evaluation

SIR: In the article "Recognition for the Outstanding Men in Your Crew" which appeared in the June 1957 issue, you said that the top men will be most severely penalized if marks in the new Enlisted Performance Evaluation System are not awarded realistically. I agree with this statement 100 per cent and would like to state the case of a shipmate as an example.

The highest mark this CPO received on the June evaluation sheet was 3.6. This was in both the conduct and appearance categories. The other three marks were 3.4. Many of the other instructors here feel that he is one of our hardest workers. He works through coffee breaks and lunch hours, studies at home at night and even writes and grades exams and blitzes at home.

He was told that he didn't get at least one 4.0 mark for the hard work because there wasn't any place on the sheet for that type of mark. I feel that the chief was above average in proficiency also. He never flunked an advancement in rating exam. He passed all the USAFI tests he took and graduated in the upper 25 per cent at the Navy Schools he attended. Yet, his marks were the same as those given to men who weren't working half so hard.

What I am trying to bring out, is not that my friend has or has not worked harder than others or that he is above or below average in proficiency, but that this new system seems just as subjective as the old.—A. N. B., PNC, USN.

• *First of all the marks assigned to your friend are considered above average. The two 3.6 marks indicate that he is in the upper half of the "highly effective and reliable, needs only limited supervision" category. This mark should be exceeded by only six per cent of the CPOs in the Navy. The 3.4 marks are in the lower half of this category and are intended to be exceeded by only 16 per cent of all CPOs. They are marks that are definitely a credit to the chief.*

Assignment of Enlisted Performance Evaluation marks is a prerogative of the commanding officer and each chief petty officer is evaluated on the basis of his performance relative to that of other CPOs assigned to his command.

The evaluation sheet does not contain space for marks concerning the "hard work" of any individual other than his proficiency in rating. If the CO feels that the man is deserving, he may comment on any work performed beyond his normal duties in the space provided.

Note that the article you mentioned stated that severe penalization will result ONLY *if marks in the new Enlisted Personnel Evaluation System are not awarded realistically. That is to say, strictly on basis of performance.*—ED.

This section is open to unofficial communications from within the naval service on matters of general interest. However, it is not intended to conflict in any way with Naval Regulations regarding the forwarding of official mail through channels, nor is it to substitute for the policy of obtaining information from local commands in all possible instances. Do not send postage or return envelopes. Sign full name and address. Address letter to Editor, ALL HANDS, Room 1B09, Bureau of Naval Personnel, Navy Dept., Washington, 25, D. C.

Nautical Charts

SIR: Page 17 of ALL HANDS, June 1957, carries an article entitled "Disposition of Deck Logs" wherein reference is made to certain Hydrographic Office periodicals.

In the next to the last paragraph the *Navy Notice to Mariners* referred to is "For Official Use Only" and is *not* therefore considered to be classified in a security sense.

The last paragraph refers to a periodical which is not distributed to the Fleet. However this office does distribute the "Monthly Information Bulletin" which is the media by which corrections to the Portfolio Chart List (HO Pub 1-PCL) and the Index Catalog (HO Pub 1-N(R)) are disseminated. This periodical, also "For Official Use Only," contains information on all nautical charts distributed by the Hydrographic Office distribution system.—Alan Hamersley, CDR, USN, Distribution Control Officer, U. S. Navy Hydrographic Office.

• *Many thanks for checking us out on Hydro publications—or at least a small part of them. We appreciate it when alert readers take pen in hand to help us keep* ALL HANDS *as accurate as possible.*—ED.

Ship Reunions

News of reunions of ships and organizations will be carried in this column from time to time. In planning a reunion, best results will be obtained by notifying the Editor, ALL HANDS Magazine, Room 1809, Bureau of Naval Personnel, Navy Department, Washington 25, D. C., four months in advance.

- USS *Dobler* (DE 48) — All hands who served in this ship and who are interested in holding a reunion during the summer of 1958 may write to J. R. Hudson, 1303 Merry Lane, La Marque, Tex.
- USN *Section Base, Santa Barbara, Calif.*—Members who served from 1942 to 1944 and who are interested in having a reunion may write to CDR R. P. Cook, USN, (Ret.), P. O. Box 774, San Diego 12, Calif.

Special Evaluation Report

SIR: I have fulfilled all the time requirements and correspondence courses for taking the JO3 exam, but it appears futile. Only about one half of the total number of test points will be available to me.

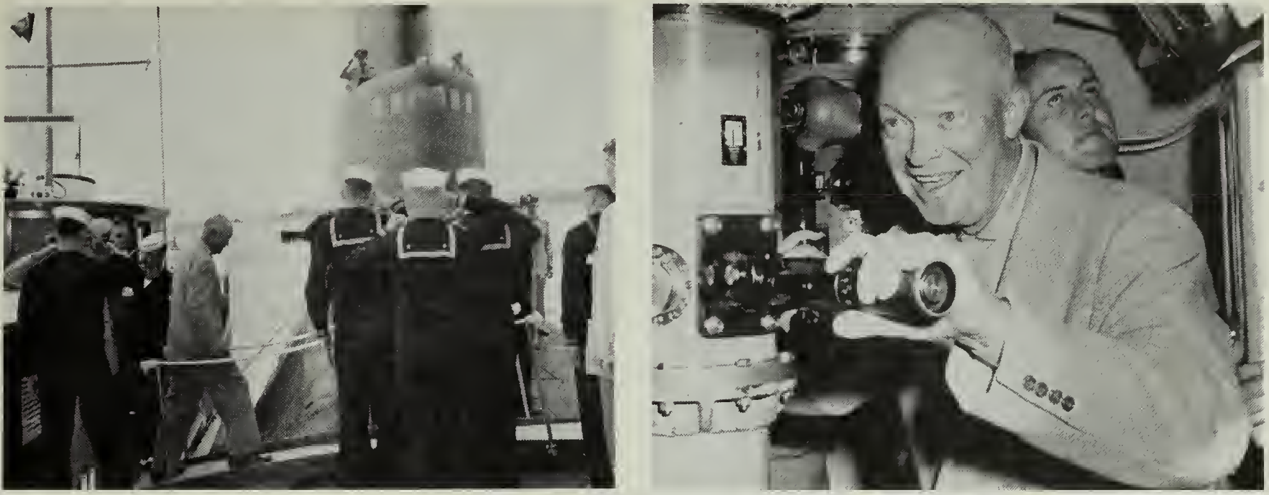
I am an ex-NavCad and have been qualified for the E-3 pay grade for the required number of months (NavCads attriting after the successful completion of the 16-week pre-flight course automatically become E-3). However, I reported to my present duty station just in time to miss the periodical evaluation reports.

This means my performance factor is, in effect, 0.0 and I automatically lose a possible 50 points on the multiple. My department head would like to give me and other men in my predicament a special evaluation, but cannot do so unless our personnel and training offices are directed to accept it. Is there a directive to cover this situation?—M. G. R., SN, USN.

• *The directive you seek is in "BuPers Manual," Article C-7821, paragraphs 3b and 4b. The former directs commanding officers to insure that at least one evaluation, either regular or special, is made during each six-month period for all enlisted personnel under their command and that it be entered into their service record.*

Paragraph 4b hits at the heart of your problem. It states that special evaluations may be made at any time the individual's performance indicates that special cognizance should be taken of particularly meritorious or derogatory performance. Among other examples of what might influence such a special evaluation is "recommended for advancement in rate for pay grade E-4 and above."

Careful examination of the two paragraphs would indicate that a special evaluation sheet might be proper in a case where a man has been recommended for petty officer advancement in a command which has not previously completed an Enlisted Performance Evaluation sheet on him.—ED.



SUBMARINER—President Eisenhower joined with the crew of *USS Seawolf* SS(N) 575 in making A-powered cruise.

Enlisted Advanced School Program

SIR: My wife and I have looked over the BuPers Instruction covering the Naval Enlisted Advanced School Program and have reached the conclusion that it is ideal for the career man. However, several questions have entered my mind.

This program requires four years' active service upon application. My first enlistment expires in November 1958. Will it be mandatory for me to complete this enlistment before I submit my application or may I submit my request before my enlistment is up?

When I entered the Navy I had only completed 9 and one-half years of schooling, but have since taken the GED test to meet the high school education requirement of the program which calls for a percentile score of 90 or above in parts III and V. I obtained a 93 in part III and 86 in part V. I feel that I could raise the latter score to the required level with a small amount of review. Is it possible for me to request this program even though I don't meet the eligibility requirement for part V of my GED?—G. E. M., PN2, USN.

• *The NEAS program has excited a great deal of interest among career Navymen who wish to continue their education. Applications for the 1958 program are due by 31 Dec 1957 and, as you undoubtedly know, you must have completed a minimum of three years of naval service by 1 Jul 1958 to be eligible and you must agree to extend for a period of six years beyond 1 Jul 1958 if selected. It is not necessary to wait for the end of an enlistment to apply for the program.*

Applicants who are not high school graduates must show that they are capable of undertaking college level work; hence the requirement for 90 percentile or better in parts III and V of the GED. Formal schooling for a period of 9 and one-half years with no indication of further study through correspondence, or Navy I & E courses, would probably not be considered evidence of a genuine interest in an educational program regardless of GED scores.

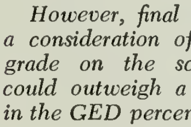
However, final selection is based on a consideration of all factors. A high grade on the screening examination could outweigh a minimum deficiency in the GED percentile ranking. Remember, this program is a strictly competitive one in which the best qualified candidates are selected. Basic mathematics, covering algebra, geometry and trigonometry, plus physics are essential to success in this program.

We are glad to see that your wife studied the instruction along with you. Navy wives play an important role in helping their husbands plan Navy careers that will be satisfying.—ED.

Change to Nuclear Weapons Man

SIR: I am serving on Recruiting Duty and would like to find out about possibilities for changing my rating to nuclear weapons man when the competitive examination is given in January. I have had four years of experience in that field.

I understand there is a study guide to be used in preparation for the examination. How would I be able to obtain it now that I am no longer attached to Special Weapons?—A. J. F., Jr., EMC, USN.



Nuclear Weapons Man

• *You'll find the specifications for change of rating to NW in BuPers Inst. 1440.22. Qualifications for advancement in rate in that field are contained in Change 9 to the "Quals Manual," which was distributed in August 1957.*

As for the study guides, you can get those from the nearest Forms and Publications Supply Stocking Point.—ED.

Submariners' Combat Pin

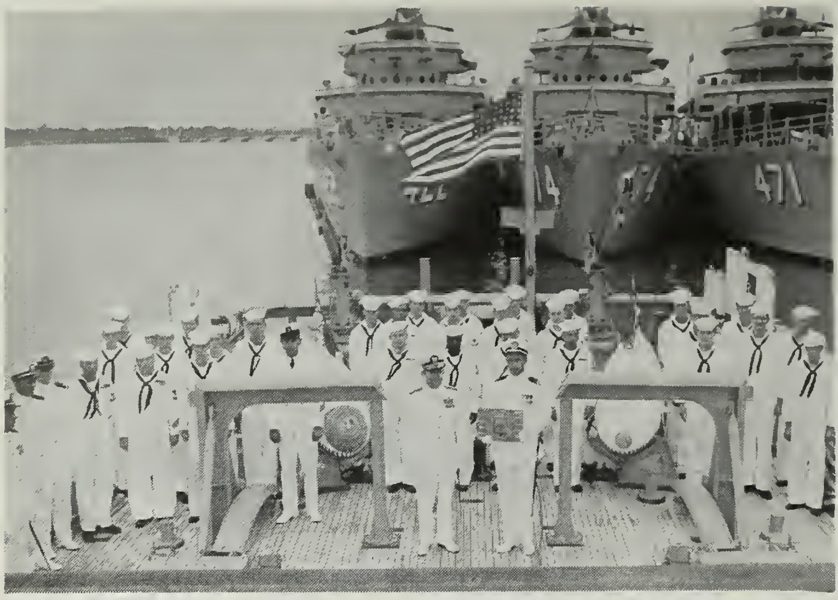
SIR: Change number three to *Uniform Regulations,* while containing a lot of good information, still does not pin down in writing where we old submarine sailors wear our combat pin when wearing large medals. Right now we wear it in one of two places: (1) Put the medals on first, then the combat pin below them on the pocket which looks very unseamanlike; (2) put the combat pin on just above the breast pocket, then place the medals above, which looks very neat.—R. G. B., LCDR, USN.

• *Not one but two articles in "U. S. Navy Uniform Regulations" take care of the situation. Take article 1521.5, which states that the holding bar of the lowest row of large medals is to be attached immediately above the pocket except that on the blue uniforms it may be placed just above the ribbons which are sewed on and covered with a dark blue patch. Article 0225.2(e)(4)c states, in effect, that the submarine qualifications insigne should be centered immediately above the medals and the submarine combat patrol insigne should be centered immediately below the medals. In other words, the combat pin would be placed on the pocket.*—ED.

Speedwriting

SIR: I am now a YN3 and hope to go higher in my rating in the future. Since I know I'll have to improve my shorthand, I'm thinking of taking a course in Speedwriting. Would this be an acceptable method of taking dictation for the performance test?—J. C. A., YN3, USN.

• *Yes, it would. As the YN3-YN2 training course says, any method of taking shorthand may be used. This would include Speedwriting. However, for advancement purposes, it is desirable that you use a system by which you may attain a speed of 120 words per minute.*—ED.



CLEAN SWEEP—Men of *USS Sagacity* (MSO 469) are presented with battle 'E' award by RADM W. E. Ferral, USN, ComMinLant. Lt. C. E. Boger is CO.

Reservist Going Regular

SIR: I have been in the Naval Reserve (TAR) Program since 18 Sep 1951 when I was recalled to active duty as a yeoman, first class. I am contemplating enlisting in the Regular Navy. Inasmuch as YN1 is not an "open" rate I would have to enlist as YN2.

I know I would be immediately eligible to take the service-wide competitive examination for YN1. If I passed this and was subsequently readvanced to YN1 when would I be eligible to take the examination for YNC? Would I be required to wait 36 months after readvancement to YN1 or would time spent as YN1 in the Naval Reserve be acceptable for this purpose?

I believe that I would be eligible for reenlistment bonus on the basis of a first reenlistment. Is this correct?—R. E., YN1, USNR.

- *Your active duty time as YN1 will count toward your eligibility for YNC. Also the time you spent as YN1 in a drilling unit under continuous service while on inactive duty counts one-half time for advancement.*

As to the reenlistment bonus, "NavCompt Manual" paragraph 044075-1 says an enlistment in the Regular Navy following discharge from the Naval Reserve is considered a reenlistment for the purposes of entitlement to the bonus. It would be computed on the basic pay of the rate held on the date of discharge. Basing our opinion on the information contained in your letter, you would be eligible for a first reenlistment bonus.—ED.

Officer Uniform Allowance

SIR: I am writing this letter to obtain information on the Officer Uniform Allowance as it applies to my case. In March 1944 while serving as an aviation pilot, first class, I received a temporary commission as ensign in the Naval Reserve and received my initial Officer Clothing Allowance.

I was released to an inactive Reserve status as LTJG in January 1947. In May of the same year I resigned my commission and enlisted in the Regular Navy as a Chief Aviation Pilot. I have now been selected for a temporary commission as ensign in the 1957 LDO Program.

The disbursing office has informed me that I will not be able to draw an Officer Clothing Allowance because I drew an allowance with my first commission in 1944. That was a long time ago. Am I eligible for an allowance at the present time?—P. A. W., ADC/AP, USN.

- *As you say, it was a long time ago. If the information in your letter is correct, and if your temporary commission of this year as USN is made under the provisions of the Act of 24 Jul 1941 or the Officer Personnel Act of 1947, we suggest you talk to Disbursing again. It is possible that, although you earlier received a uniform allowance when you made ensign in the Naval Reserve, you are not entitled to another allowance on the basis of a first appointment in the Regular Navy. The book says—first appointment from enlisted status in the Naval Reserve equals one Officer Uniform Allowance; first appointment from enlisted status in the Regular Navy equals one Officer Uniform Allowance. The book doesn't say you can't do both.*

To spell it out in detail, your temporary appointment to commissioned rank in 1944 was effected from an enlisted status in the Naval Reserve and you received a uniform allowance on the basis of a first *temporary commission in the Naval Reserve.*

Again, apparently, you are entitled to a uniform allowance on the basis of a first *temporary appointment to a commissioned rank from an enlisted status in the* Regular Navy.

However, don't assume you can make a habit of receiving an initial Officer Uniform Allowance. If, for example, you were to be reverted to your permanent enlisted status in the Regular Navy and were again appointed to commissioned rank, you would not be entitled to an initial *uniform allowance. All clear, now?*—ED.

TALKING IT OVER—Crew members of *USS New* (DDE 818) chat with their CO after winning DesLant Battle Efficiency 'E' for third time.

More on Cyclops

SIR: I was interested in the theory of LCDR M. S. Tisdale concerning the disappearance of USS *Cyclops*, as presented in the August issue.

His article is not only plausible but convincing—to almost anyone but a stubborn Missourian like myself. Here are my reasons for doubt:

In the summer of 1916 I was a passenger on *Cyclops*' sister ship, *Neptune*, bound from Norfolk to the West Indies and the Canal Zone. *Neptune* hove to off Parris Island to take aboard replacement Marines for the various landing forces ashore in the Caribbean area.

The crew of *Neptune* pointed out to me the top-hamper of the collier *Hector*, sunk at that spot. *Hector* was loaded, as was the custom of the type, with full bunkers aft and forward, with the midship bunkers holding miscellaneous freight and rigged with bunks for passengers. Therefore, there was no weight amidships to speak of. She, too, was hove to, awaiting passengers and rolling, pitching and working in the seaway. Suddenly she broke in two amidships, and sank.

Cyclops was loaded in the same manner, but with heavy manganese ore, not coal. Seems to me that she would be much more likely to break up than *Hector*.

Speaking of missing ships, does anyone in your office or among your readers know what happened to the Indian type tug—I've forgotten her name—that disappeared some place between Diamond Head and Samoa. She had two 500-ton steel lighters hooked up in a tandem tow. No trace of her has ever been found.—Earl E. Sutton, BMC, USN (Ret).

- *It is gratifying to receive letters such as yours demonstrating not only an interest in the articles but having something to add to them.*

The theory which you present concerning the disappearance of Cyclops *is interesting, logical and as plausible as any. However, as you know, no way has been found to determine the exact circumstances of the disappearance.*

As for the fate of the "Indian type tug," you have us two-blocked unless you happen to remember the name or, at least, the date. Perhaps some of our readers may be able to give you a clue if they recollect the incident.—Ed.

Reserve Status

Sir: I am one of the inductees who will be discharged by the end of this year. I had no Reserve service nor active duty before I was drafted. Can you tell me what my Reserve status will be after I am released?—J. W. P., FTA 3, USN.

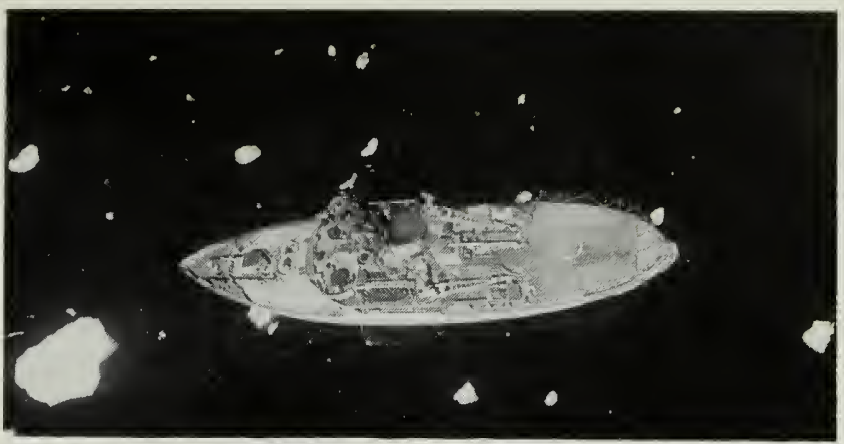
- *We can, and we will.*

By law, every man entering the armed forces after 9 Aug 1955—regardless of whether he's enlisted, appointed or inducted—has a minimum six-year military obligation.

When you complete your active duty you will be transferred to the Ready Reserve. At that time you will have a choice as to whether or not you want to join a drilling unit. If you do, you will be eligible for transfer to the Standby Reserve when the combined total of your active duty time and the length of your satisfactory participation in an accredited training program equals five years. After that, you would be in the Standby Reserve for an additional year.

Incidentally, in your case a year of "satisfactory participation in an accredited training program" is defined as attendance at a minimum of 24 drills (or less than 10 per cent absence if assigned to a 48-drill unit), plus 14 days' active duty for training—both completed within four consecutive quarters.

If you don't join a drilling unit you will remain in the Ready Reserve until your active duty and Ready Reserve time add up to six (instead of five) years.—Ed.



REAL COOL—*USS Edisto* (AGB 2), waiting for MSTS tanker at southern belt of ice field. This year's ice conditions have been heaviest in Arctic history.

Naval Aviation Observer

Sir: Here is a question that comes up often among enlisted Bombardier-Navigators. Are we entitled to wear the Radar Observer Wings that commissioned Bombardier-Navigators wear? The reason I ask is that we are doing the same job in pre-flight preparation and the same in-flight duties. The specialty job code number we receive after completing the twenty-week course at HATULANT, NAS, Sanford, Fla., shows we are qualified as Bombardier-Navigators.

Another question, what are the requirements for wearing Aircrew wings?

—P. V. K., AQ1, USN.

- *What you refer to as a Radar Observer Wing is apparently the Naval Aviation Observer insigne. In order to wear it, you would first have to be designated as a Naval Aviation Observer. Only commissioned or warrant officers in the Navy or Marine Corps who have successfully completed the course prescribed for Naval Aviation Observers, and who have not less than 100 hours in the air, may be designated as Naval Aviation Observers. This ruling is according to a public law passed by Congress (see Title 10 of the U.S. Code, Section 6024). Under this law it is not legal to designate an enlisted man as a Naval Aviation Observer.*

You are, however, eligible to qualify for the aircrew insigne. OpNav Inst. 1510.4, BuPers Inst. 1220.8 and article C-7403 of the "BuPers Manual" outline qualification requirements for combat aircrewmen. Anyone who qualifies as a combat aircrewman is authorized to wear the aircrew insigne.—Ed.

Tax Regulations Concerning Sale or Exchange of Property

Sir: The May issue of All Hands declares that losses from the sale or exchange of property are deductible items in computing taxable income for federal income tax purposes.

Certainly not all losses from the sale of property are deductible. It is a matter pretty well established and understood that losses on the sale or exchange of an individual's own personal belongings or assets, whether real or personal, are not deductible. The law limits deductible losses to those incurred in a trade or business, losses incurred in a transaction entered into for profit, and losses resulting from a casualty or from theft. The All Hands article makes no distinction between losses on sale or exchange of property held for personal use and business or investment property. It should have been pointed out that losses on the sale of an individual's residence or personal belongings are not deductible—J. A. J., Jr., CDR, USN.

- *Thank you for bringing this matter to our attention. Realizing the importance of federal income tax information we had had the article to which you refer checked by tax authorities to correct any misstatements. However, the best laid plans . . .*

The reprint of the material in the May issue of All Hands *which has already been distributed to all officers and enlisted men on active duty under the title of "Rights and Benefits of Navymen and Dependents" (NavPers 15885A), was changed to say "Losses from sale or exchange of* business *property are deductible items."*

Complete information concerning federal income tax is contained in the Bureau of Supplies and Accounts pamphlet "Federal Income Tax Information." However, if your tax problem is of a serious nature, we would suggests that you contact BuSandA (Attn: B1), Navy Department, Washington 25, D. C.—Ed.

Performance and Leadership Count, As Well As GCT

Sir: I see that the Navy policy is to discharge men in the lowest GCT grouping. I'm a seaman with a GCT of 40. I know I can make Chief some day, and I want to make a career in the Navy. What's the straight scoop?
—J. T. A., SN, USN.

• *First off, let's get something straight — GCT can give a good indication of how fast a man can learn, especially in a Navy school. It is not an I.Q. score. It does* NOT *tell that a man is or will be a good petty officer, or a good leader. To illustrate this point, as of February 1957, there were substantial numbers of petty officers in the Navy with GCTs of less than 42, of which a significant percentage were Chief Petty officers.*

The fact is — discharge, under the instruction you asked about, is not *based solely on GCT. Here's the straight skinny:*

Separation of men with Group IV rating is contingent on the over-all potential for useful service and performance record — not *on the the GCT alone. The Chief of Naval Personnel, in BuPers Inst. 1910.11B, has set up the following criteria which govern the separation of this group, specifically, non-petty officers who have served continuously an active duty for more than 18 months, who have a GCT of 41 or less* AND

"1. Who are not potential petty officer material. *Petty officer potential should be judged on (a) over-all performance, (b) lack of progress toward advancement in rating, i.e., not having passed a service-wide examination, not having completed specified practical factors, training course, or performance tests;* OR

"2. Who are a burden to the command. *Performance* approaching *that warranting recommendation for undesirable discharge is the criterion in this case."*

Men in the so-called Group IV or GCT rating can reenlist and can make a career in the Navy; they can and do go up for rating, including up to CPO.

However, there are certain capabilities or potentials for service which must be considered. Your commanding officer's recommendation is the governing factor in the matter of your reenlistment.

If, in his judgment, he considers that you have over-all potential for future useful and responsible service and provided further, that you have maintained a satisfactory record and shown progress toward advancement in rating, he will recommend you for reenlistment.

Once you have reenlisted and become a "career man" the Chief of Naval Personnel has given this assurance in BuPers Inst. 1133.11: "Provided performance continues satisfactory, any man who has been accepted for a succeeding term of service should have reasonable assurance that he will be permitted to serve until eligible for retirement or transfer to the Fleet Reserve. Such assurance is fundamental to the concept of a naval career and is given to men who are dedicating themselves to the service of their country."

Thus, anyone who performs creditably, shows continued improvement and gives promise of potential for future useful service, as borne out by the commanding officer's recommendation, can rest assured he can find a rewarding career in the Navy.—Ed.

Does Her Mission, Plus

Sir: In the July issue (page 19) you published a letter about the Fleet Tug USS *Quapaw* (ATF 110) in which "due modesty" was exercised. You asked for comments from other contenders, including USS *Ampere* (ADG-11) and *Mataco* (ATF-86). *Ampere* has since been decommissioned, so here goes:

Quapaw boasts of steaming 19,666 miles in 3312 hours during 1956. Take a back seat, sister, as we *(Mataco)* steamed not 19,667 but a mere 24,092 in only 2701 hours. We don't believe in wasting any time.

So far as *Quapaw's* seven reenlistments, *Mataco* had nine and two extensions.

Mataco is again in WestPac. While en route, we steamed 8984 navigational miles delivering barges to various far-flung islands, participating in salvage and rescue ops, towing targets and launching drones during Fleet gunnery exercises. So you see, we do our mission—plus.

I contend that *Quapaw* should be humble rather than "duly modest."—H. R. S., EN1, USN.

• *OK! . . . OK! . . . OK!!! Well Done!*—Ed.

The Greeks Have a Word for It

Sir: The upper right-hand picture of the article about Greece on page 35 of the August issue seems to be in error. This appears to be a view of the principal church in Augusta Bay, Sicily, which I am familiar with after several visits there. It certainly does not resemble any of the Greek churches I have ever seen on my frequent visits to Greece. My wife, a native of Piraeus, who lived in the Athens area until late 1951, fails to recognize this view as a Greek church. Furthermore, the type of carriage shown in the photo is familiar in Augusta Bay, Sicily, although I have seen the type of carriage in Kiphissia, Greece, where we spent our honeymoon.—L. A. K., LCDR, USN.

• *You are right. The church pictured is one in Augusta Bay, Sicily.*

You must know the area well and have a sharp eye to detect this work of the "gremlin" that sometimes practices his dirty work in our office.—Ed.

Study of Compressed Gas Systems

Sir: I would like to find out about the oxygen-nitrogen generating plant school. I'm sure there is such a school and I think it's in Norfolk, Va., but I haven't found any information.

The main points I'm interested in are these:

Who is eligible for the school? Where is it? When does it convene? Can a man go to it as TAD from his station? Since compressed gas systems are being used more and more aboard aircraft carriers, I believe this is becoming an important field.—B. D. G., AB2, USN.

• *The U. S. Naval School, Compressed Gases (Class C) is located at the Norfolk Naval Shipyard, Portsmouth, Va. Classes convene every nine weeks and the course lasts for 18.*

Personnel may be sent to the school in either a TAD or TERMINS status. However, the rates eligible for the school include only UT3, BT3, EN3, MM3 and above, so your chances of getting into it are pretty slim.—Ed.

Pay for Umpire and Referee

Sir: Can you answer this question for me?

Is it permissible for a Navyman in a duty status to umpire or referee ball games during normal working hours and get paid for it? In this case he would be getting two checks, one from the Navy and one from Special Services.—C. S., MN1, USN.

• *Definitely not. In order to be paid for your services as an umpire or a referee you would have to be in an off-duty, liberty or leave status while performing such services.*—Ed.

Teaching Jobs for Navy Wives

Sir: My wife is a college graduate holding a B.S. degree in English. I would like to know if it is possible to be assigned to an overseas location where there is a need for teachers.—B. C. M., GM1, USN.

• *Attempts are made to coordinate overseas shore duty for enlisted personnel with employment of their wives who are qualified as teachers. The following conditions must exist before requests for such duty can be granted: (1) you must be eligible for foreign shore duty and in a pay grade entitling you to dependent's transportation; (2) the period of obligated service must be sufficient to extend through completion of the minimum tour of overseas shore duty;*

(3) there must be available billets at bases concerned for the personnel desiring such duty; (4) your wife must desire teaching employment and must equal or exceed required minimum qualifications as outlined in BuPers Inst. 1755.2.

Assignments to such duty usually are made by ComServLant or ComServPac with the selections for this type duty most frequently made from men currently on sea duty with one of the Fleets.

Your wife's application, on a Civil Service Form 57, with a resume of college credits, should accompany your request when you submit it through normal administrative channels.

Although there is no program whereby duty assignments for officers are coordinated with employment of their wives as teachers, officers' wives desiring to teach frequently are employed when they are qualified and present at location of the school.—Ed.

Shore Duty for HMs

Sir: I am writing in regard to the newly established sea-shore rotation plan, commonly referred to as Seavey. I would like clarification of the status of Hospital Corpsmen such as myself who commenced their overseas tour on or after 1 Jan 1956 and therefore have missed the first part of the Seavey. As I understand it, we will not be placed on the Seavey until rotation data cards are issued in 1958. Will we, after completing the prescribed overseas tour, be made available for assignment within the Fleet at the discretion of the distributional commander?

It is commonly known that HM billets are found primarily ashore, either overseas or in the CONUS. This is particularly true of E-5 and below. I would like to ask just how many E-5 Hospital Corpsmen are still at sea under the old sea-shore rotation program?—W. F. W., HM2, usn.

• *Take a look at the September issue of* All Hands. *The center pages are devoted to a layout that will explain the operation of Seavey and will give you an idea of the effect it will have on your sea/shore rotation. The new program will provide very favorable shore duty tours for the HM rating because of the large number of HM billets in the continental U. S.*

Men in the HM rating who are assigned to overseas shore duty immediately after shore duty in the continental United States could be eligible for reassignment to another sea duty unit before being returned to U. S. shore duty. However, personnel whose overseas shore terms expire before their entry in the Seavey could request an extension of their tour so they will be on the Seavey when their term expires. Normally, personnel in the program will be ordered ashore when their overseas terms expire.

Approximately 793 HMS in pay grade E-5 and below are scheduled to receive rotation data cards for segment 3 of the Seavey effective on 1 Oct 1957.

—Ed.

At Anchor or Underway?

Sir: During our stay in WestPac we used either our port or starboard anchor for a maneuvering aid while going alongside a pier. At the time we were still underway and dragging the anchor. I claim that through the definition of anchoring, a ship is not anchored while using the anchor for a maneuvering purpose and no display of the anchor ball should be made. Others claim that as soon as the anchor hits the bottom the anchor ball should be displayed regardless of the reason.—A. J. S., BM2, usn.

• *In a maneuver such as this, the anchor ball is* not *displayed. A vessel with her anchor on the bottom but which is moving over the ground is a vessel underway. She should display the signals for a ship underway and not those for an anchored ship. Rules relating to night and day signals for anchored vessels apply to ships lying at anchor not expecting to move.*

Displaying the anchor ball allows other vessels to plan their own movements on the assumption that the vessel is in a relatively fixed position and will remain where she is. It would be misleading for a ship to display an anchor signal when she is maneuvering, be it ever so slowly.—Ed.

Transfer to Seabee Rating

Sir: I have 17 years in the Navy and hold the rate of BM1 aboard a ship. Is it possible for me to transfer to the Seabees? If so, what channels do I have to go through with my request?—A. F., BM1, usn.

• *First pick the Construction Battalion rating for which you are best qualified and wish to enter. Complete the applicable Navy training course, practical factors and performance tests for the rate, if any, and then submit a request to the Chief of Naval Personnel via your skipper requesting authority to change your rating. BuPers Inst. 1440.5B contains a great deal of information concerning changing of rate. Suggest you get hold of a copy and study it.*

If you choose a CB rating in which you have previous experience it will more than likely increase your chance for advancement to pay grade E-7.—Ed.

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Government Printing Office
Washington 25, D.C.

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FLAT HAT PALMA STYLE—Cruisermen enjoy shopping while on cruise in Med.

On an Island in the Med

THE NAVYMAN sails his way to many spots throughout the world and has an opportunity to visit places off the beaten track of the ordinary tourist. Cruisermen of USS *Salem* (CA 139) while in the Med sailed to the island of Mallorca where they stopped at Palma, the capital and largest city of the Balearic Islands. The Balearic group of islands is a Spanish province located about 60 miles off the east coast of Spain.

As the mild climate, palm-fringed Balearics come into view, beauty begins to take shape in the form of terraced, irrigated slopes arranged with olive groves and orchards of figs, lemons, oranges, and almonds.

The Balearic Islands have always been prizes of war because of their key position between North Africa and southern Europe in the western Med. The influence left by the conquering nations upon the architecture of these islands has only added to its photogenic appeal.

After an extensive day of sightseeing, shopping, picture taking, and watching bull fights, the Navy visitors enjoy relaxing with a cool beverage or a meal at one of the many colorful sidewalk cafes of Palma.

A GOOD TIME is had at Palma by Cruisermen sight-seeing and shopping.

These Mark You As Seafaring Men

If you've been around the Navy any time at all, you'll have no difficulty recognizing submariners by the two plump dolphins gazing at one another above the wearer's breast pocket.

However, there's many another bit of symbolism adopted by the Navy which can give you a reliable clue as to the wearer's status and occupation. To the uninitiated, mineman and torpedoman might, for example, seem to be very similar but both will be eager to point out the vital distinctions. Nor is it advisable to fail to distinguish between a yeoman and personnel man if either is within hearing distance of your faux pas.

To help guide you through the intricacies of distinguishing marks, collar devices, sleeve marks and specialty marks, you'll find on the following pages a compilation of all such insignia authorized by the Navy as of October 1957.

A brief word as to their significance: The rate (which refers to an individual's pay grade), rating (which describes his occupation), special qualifications, length of service and conduct of an enlisted man can be determined by the sleeve and breast insignia he wears. In addition, brassards may indicate an assignment to a special detail such as shore patrol, recruiting service, ambulance and first aid, or damage control.

Distinguishing marks (shown on pages 32-33), consisting of embroidered devices worn on the right arm, symbolize special qualifications in addition to those required for the various ratings. Twenty-six distinguishing marks are now authorized. Deep Sea Diver has been added since a similar list of distinguishing marks was last presented in the August 1952 issue of ALL HANDS.

Metal or embroidered insignia worn on the left breast also indicate a special qualification or designation. Officers and enlisted men are entitled to wear the following: Naval aviator, aircrew, balloon pilot, parachutist, submarine and submarine combat patrol insignia, and, in addition, officers are eligible for naval aviation observer, flight surgeon, flight nurse, submarine medical and submarine engineering duty insignia.

Ship-name sleeve marks (such as USS *Tang*) are worn on the right sleeve of dress blue and white jumpers by all shipboard enlisted personnel below CPO.

Officer candidates wear shoulder-sleeve insignia bearing the letters OC on the left sleeve just below (one-half inch) the shoulder seam. Reserve officer candidates are designated by the letters ROC.

Commissioned and warrant officers may also be identified by rank (pay grade) as well as line or corps (occupation), by reference to the illustrations on page 32.

An eagle and anchor emblem — forerunner of the rating badge — was the first rating mark. In 1841, boatswain's mates, gunner's mates, carpenter's mates, masters-at-arms, ship's stewards and ship's cooks were authorized to wear this insigne on their right sleeve. The same device was also worn on the left sleeve by quartermasters, quarter gunners, captains of forecastles, captains of tops, captains of after guard, armorers, coopers, ship's corporals and captains of the hold.

In 1866, specialty marks which represented instruments used by the various specialists in performing their tasks were added to the uniform of enlisted personnel. In addition, the eagle and anchor with a star was still worn by all line petty officers and the eagle and anchor without the star was worn by all other petty officers.

In 1886, when rating badges were established, some 15 specialty marks were also provided to cover the various ratings. In 1893, petty officers were reclassified and the rating of chief petty officer was established.

The first of the distinguishing marks as we know them today also appeared in 1886. The seaman gunner's mark — a bursting shell — was authorized to be worn by every enlisted man — regardless of rating, who was also qualified as a seaman gunner. The mark was to be placed upon any other rating badge which a seaman gunner was entitled to wear. If the man was not a petty officer, this mark was to be worn in place of the rating badge.

The seaman gunner's distinguishing mark has lasted through the years and is still included in today's *Uniform Regulations* although the qualifications are not now active.

In time, the distinguishing mark had come to denote a specific qualification in addition to the qualifications required for a specific rating.

Uniform Regulations listed 16 specialty marks for the various ratings in 1905. In addition, five distinguishing marks were authorized: Seaman gunner, gun captain, gun pointer, hospital apprentice and apprentice.

By 1913, the number of distinguishing marks was increased to 13. Included under the heading of distinguishing marks were the "branch mark" — worn by non-petty officers on the shoulder seam of the sleeve of the overshirt and jumper to distinguish men of the seaman branch from men of the artificer branch — and service stripes, worn by "all re-enlisted men."

Distinguishing marks have undergone many changes through the years. It was customary at first, to wear certain distinguishing marks below the rating badge, others on the arm opposite the rating badge and one (apprentice mark) just below the V of the jumper.

From 1865 to 1884 the rating badge was worn on the right sleeve by "line" ratings and on the left sleeve by all others. From 1885 to 1913, petty officers wore their rating badges on the right or left arm depending on which watch they were assigned.

Commencing in 1913 the rating badge was worn on the right sleeve by petty officers of the seaman branch and on the left sleeve by all other petty officers.

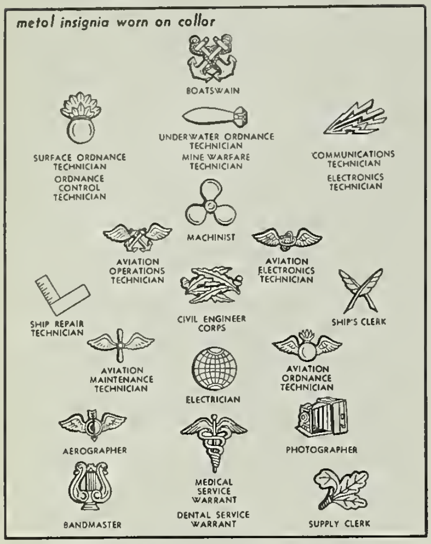
Since 1948 all distinguishing marks have been worn on the right sleeve and all rating badges have been worn on the left sleeve.

Only one thing can be certain — the illustrations shown on pages 32 and 33 will, before long, be changed. As the Navy advances, so too, do the Navyman's occupations.

By golly they did change! See below:

(Other changes made since the Rating Insignia chart, on the next page, went to press: A new General Service rating in Group IX, Photographic Intelligenceman-PT-was established. In the Exclusive Emergency Service ratings, title of Cable Censor-ESX-has been changed to Telecommunications Censorman-ESK.)

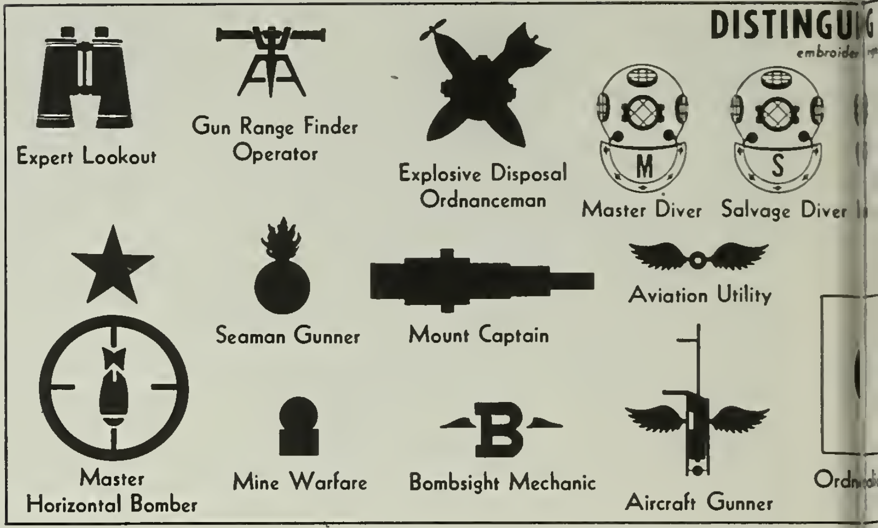
COLLAR DEVICES
WARRANT OFFICERS


metal insignia worn on collar
BOATSWAIN
SURFACE ORDNANCE TECHNICIAN
ORDNANCE CONTROL TECHNICIAN
UNDERWATER ORDNANCE TECHNICIAN
MINE WARFARE TECHNICIAN
COMMUNICATIONS TECHNICIAN
ELECTRONICS TECHNICIAN
MACHINIST
AVIATION OPERATIONS TECHNICIAN
AVIATION ELECTRONICS TECHNICIAN
SHIP REPAIR TECHNICIAN
CIVIL ENGINEER CORPS
SHIP'S CLERK
AVIATION MAINTENANCE TECHNICIAN
ELECTRICIAN
AVIATION ORDNANCE TECHNICIAN
AEROGRAPHER
PHOTOGRAPHER
MEDICAL SERVICE WARRANT
DENTAL SERVICE WARRANT
BANDMASTER
SUPPLY CLERK

U.S. NAVY

DISTINGUI

embroider



SHOULDER-SLEEVE INSIGNIA

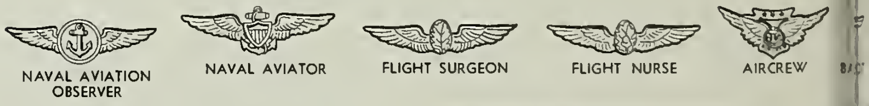
OC

OFFICER CANDIDATE

ROC

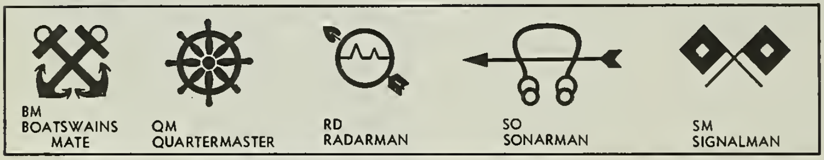
RESERVE OFFICER CANDIDATE

BREAS

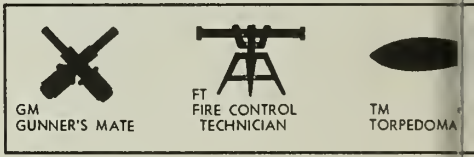


SPECIALTY MARKS

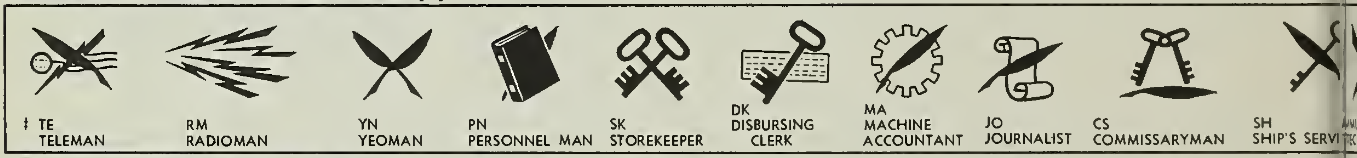
DECK GROUP (I)



ORDNANCE GROUP (II)

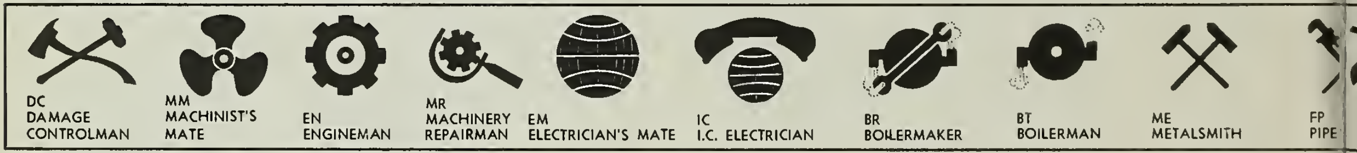


ADMINISTRATIVE AND CLERICAL GROUP (V)

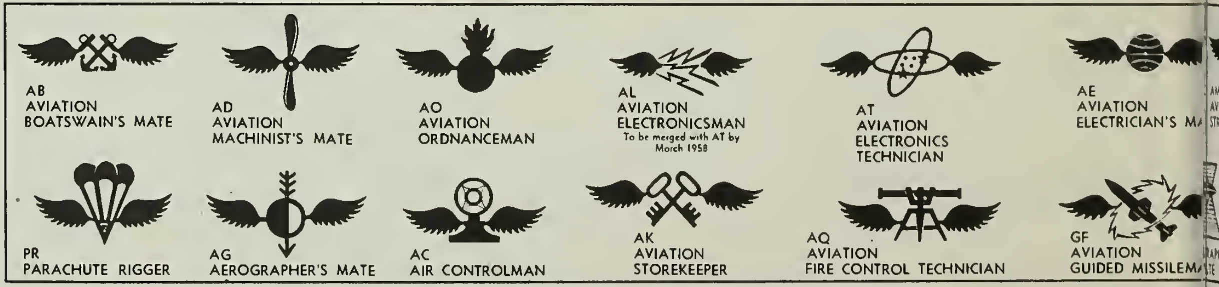


‡ TE is being disestablished—to be phased ou

ENGINEERING AND HULL GROUP (VII)



AVIATION GROUP (IX)

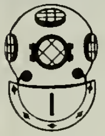

AB AVIATION BOATSWAIN'S MATE
AD AVIATION MACHINIST'S MATE
AO AVIATION ORDNANCEMAN
AL AVIATION ELECTRONICSMAN
To be merged with AT by March 1958
AT AVIATION ELECTRONICS TECHNICIAN
AE AVIATION ELECTRICIAN'S MA
PR PARACHUTE RIGGER
AG AEROGRAPHER'S MATE
AC AIR CONTROLMAN
AK AVIATION STOREKEEPER
AQ AVIATION FIRE CONTROL TECHNICIAN
GF AVIATION GUIDED MISSILEMA

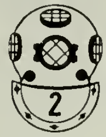
Prepared by ALL HANDS Magazine

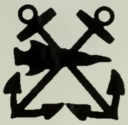
NSIGNIA

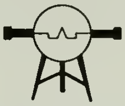
G MARKS

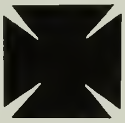
right arm

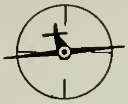

Diver
First Class

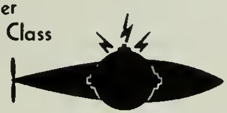

Diver
Second Class

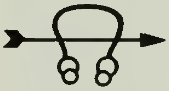

Assault Boat
Coxswain

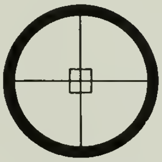

Fire Control
Radar Operator

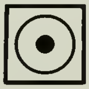

Fire Fighter
Assistant


Antiaircraft
Machine Gunner


Advanced
Underseas Weapons Man

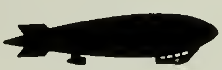

Sonar Operator


Gun Director
Pointer and Trainer
and
Gun Pointer
and Trainer


Rifle, Carbine and
Pistol Sharpshooter

E

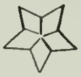
Navy "E"

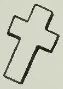

Airship

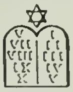
lion

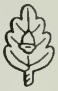
SLEEVE INSIGNIA
COMMISSIONED OFFICERS

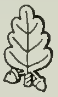
gold embroidered worn on sleeve

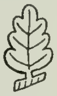

LINE

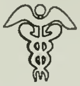

CHRISTIAN
CHAPLAIN

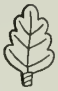

JEWISH
CHAPLAIN

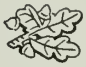

MEDICAL CORPS

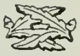

DENTAL
CORPS

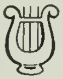

MEDICAL
SERVICE
CORPS


HOSPITAL
CORPS


NURSE
CORPS


SUPPLY
CORPS


CIVIL
ENGINEER
CORPS


LEADER
U. S. NAVY BAND

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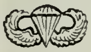
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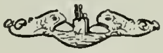
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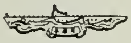
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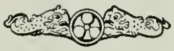
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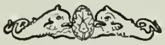
ENGINEERING DUTY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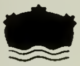
MEDICAL

SHIP-NAME SLEEVE MARK

ENLISTED RATINGS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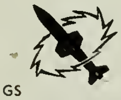
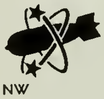

GS
GUIDED MISSILEMAN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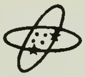
NUCLEAR
WEAPONS MAN

ELECTRONICS GROUP (III)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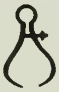
PRECISION EQUIPMENT GROUP (IV)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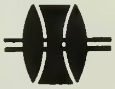
INSTRUMENTMAN


OM
OPTICALMAN

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C MUNICATIONS
ECHNICIAN

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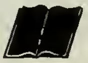
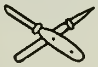
MISCELLANEOUS GROUP (VI)


PI
PRINTER
To be combined with LI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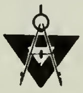
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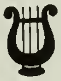
DRAFTSMAN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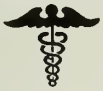
MUSICIAN

MEDICAL (X)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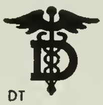
HOSPITAL
CORPSMAN

DENTAL (XI)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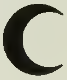
DENTAL
TECHNICIAN

STEWARD (XII)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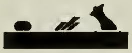
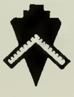
STEWARD

ML
MOLDER


PM
PATTERNMAKER

CONSTRUCTION GROUP (VIII)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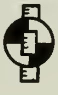
BUILDER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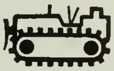
SURVEYOR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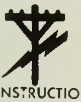
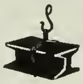
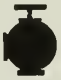
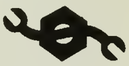
DRIVER


CE
CONSTRUCTION
ELECTRICIAN'S
MATE


SW
STEELWORKER


UT
UTILITIES MAN


CM
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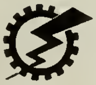

TD
TRADEVMAN

EXCLUSIVE EMERGENCY SERVICE RATINGS

ESA
AIRCRAFT CARBURETOR
MECHANIC

ESV
AVIATION PILOT

ESU
BOOKER

ESC
CHAPLAIN'S
ASSISTANT

ESF
FIRE FIGHTER

ESI
INSTRUCTOR

ESP
PHOTOGRAMMETRY
ASSISTANT

ESE
PHYSICAL TRAINING
INSTRUCTOR

ESX
SPECIALIST

ESR
TRANSPORTATION
MAN

ESM
UNDERWATER
MECHANIC

ESW
WELFARE AND
RECREATION LEADER

★ ★ ★ ★ TODAY'S NAVY ★ ★ ★ ★

VERSATILE MISSILE—Knowledge and skill have made *Regulus II,* designed to operate from subs and surface ships, a missile with added punch and power.

Transfer by Highline

USS *Pocono* (AGC 16) may not be a hospital ship, but until one comes along she'll do just fine.

On her way from Norfolk, Va., to Naples, Italy, to participate in NATO exercises the amphibious force flagship went into highline operations twice within a week to bring critically ill Navymen on board for medical treatment.

The first time, Merle Kramer, TM3, was brought on board from USS *Bergall* (SS 320), one of several subs which traveled part of the way with *Pocono.* Kramer was described as having "possible appendicitis," but he recovered and did not require surgery.

On the second occasion the situation was much more serious. The ship's doctor, LT John D. Weresh, was highlined to USS *Melvin R. Nawman* (DE 416) to treat Charles E. Bowen, RD3, who was suffering from a lung condition. When it was found that the patient could be moved, he and Dr. Weresh were highlined to *Pocono.* There, his lung had to be pierced in order to relieve pressure and allow oxygen to fill it. He was then kept under an inhalant until he could be transferred to the Naval Hospital in Naples.

Operation Deep Freeze III

An exodus which started in late August from east and west coast ports involving more than 4000 men embarked in 10 ships and supported by aircraft will continue through early December. These are the men and ships taking part in Operation Deep Freeze III.

The general scope of the operation is to resupply the stations established during Deep Freeze I and II which were set up to support the U. S. National Committee for the International Geophysical Year on the Antarctic continent. Another phase of the annual expedition will be to replace worn-out equipment, perform additional construction, transport the relief IGY scientific and naval support personnel to the Antarctic, and return the relieved personnel to the United States.

The seven U. S. stations in the Antarctic are: Little America, Byrd, Amundsen-Scott South Pole, Ellsworth, Wilkes, Hallet, and Naval Air Facility, McMurdo Sound.

Ships taking part in the operation are: the ice breakers USS *Glacier* (AGB 4), *Burton Island* (AGB 1), *Atka* (AGB 3), and the Coast Guard's USCGC *Westwind* (WAGB 281); cargo ships USNS *Greenville Victory, Pvt. John R. Towle,* USS *Arneb* (AKA 56), and *Wyandot* (AKA 92); the tanker USS *Nespelen* (AOG 55) and the escort USS *Brough* (DE 148).

One task group will steam via New Zealand to resupply the Ross Sea, Cape Adare, and Wilkes (Knox Coast) stations. It will arrive at Little America about 1 December; McMurdo Sound, 1 January; Cape Hallett, 15 January; and Knox Coast, 1 February. Another called the Weddell Sea Group, will sail via Dakar and Capetown, South Africa, to the Weddell Sea area, arriving at Ellsworth IGY station about 10 January. There will also be a contingent of 23 Navy planes and an Air Force group of eight *Globemaster* aircraft.

For the second year in a row, *Brough* was the first to get underway. Going *Brough* one better is the man in charge of the operation, RADM George Dufek, USN (Ret.), who will be making his fifth trip to the Antarctic. He was there with Admiral Byrd in 1939, then made his second trip on Operation Highjump in 1947. In the last two operations he was Commander, Task Force 43. He succeeds Admiral Byrd who died earlier this year, as U. S. Antarctic Projects Officer.

Planned operations for Deep Freeze III require an estimated 25,000 tons of cargo and 666,320 gallons of bulk petroleum products to be transported to the Antarctic by ship and plane. This cargo will be either air-dropped or hauled into the different stations by tractor.

YESTERDAY'S NAVY

On 2 Nov 1943 a Japanese naval force was defeated in the Battle of Empress Augusta Bay, Bougainville. On 9 Nov 1880 a two-year, 'round the world cruise was completed by USS *Ticonderoga,* first U. S. steam warship to make such a trip. On 12 Nov 1776 the American ships, *Alfred and Providence,* captured a British transport carrying 10,000 uniforms for General Burgoyne's army. On 21-22 Nov 1918 the German High Seas Fleet of World War I surrendered. On 25 Nov 1943 five U. S. DDs defeated an equal force of Japanese DDs in the Battle of Cape St. George.

Some of the vehicles required for unloading ships, clearing snow, erecting bases, and transporting supplies and personnel include D-8 tractors which weigh 35 tons, down to jeep-sized, treaded *Weasels.*

During the first year, with 1805 men taking part, two stations were erected. A 22-building city was erected on the 800-foot-thick ice shelf at Little America, and a 34-house air base was established on lava ash at McMurdo Sound. Five hundred tons of building materials, equipment, and supplies for Byrd IGY Station were cached at Little America. A similar amount was left at McMurdo Sound for building the Byrd and South Pole Stations.

In Deep Freeze II, with 3525 men participating, facilities were added to the existing two bases and five more bases were built. Seven buildings were added to the 22 at Little America and three buildings and a gasoline storage tank were added to existing facilities at McMurdo. IGY stations with barracks, mess-halls, shops, and scientific buildings were constructed at five different locations — Byrd, South Pole, Ellsworth, Wilkes, and Hallett.

Also operating in the Antarctic area in support of the IGY will be units from Argentina, Belgium, Chile, France, Japan, New Zealand, Norway, Union of South Africa, United Kingdom, and the USSR.

Tops in 'Boat Control'

The Pacific Fleet Amphibious Force attack transport USS *George Clymer* (APA 27) has won the coveted "Assault Boat Insigne."

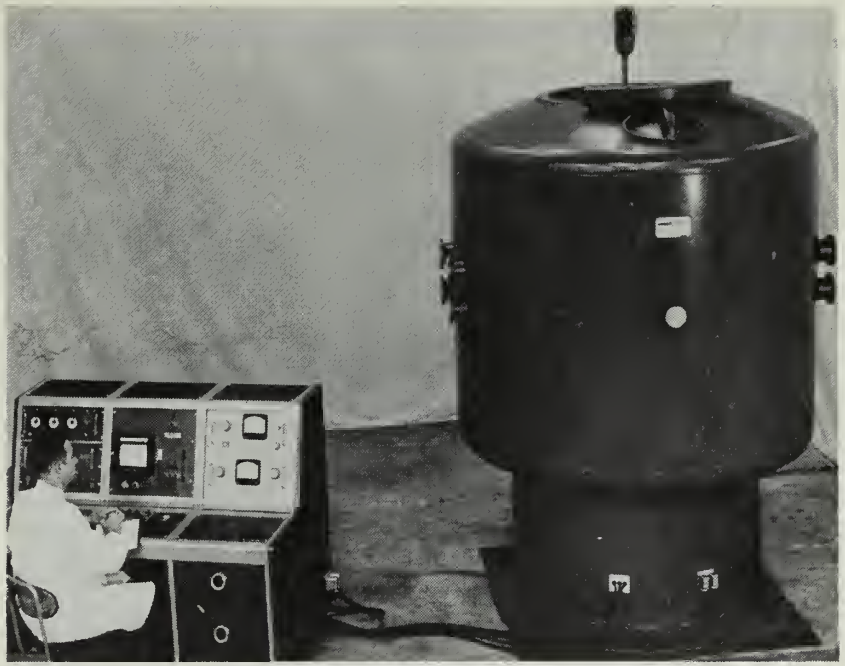
This award is presented to ships attaining a minimum score of 90 in boat control — debarkation and unloading — and beaching tactics during an official amphibious exercise or operation.

Clymer became eligible for the award as a result of operations in the Western Pacific.

The competition for the Assault Boat Insigne is an important phase of PhibPac's annual competitive training program. It is the most highly prized insigne any amphibious ship may earn. The insigne is made up of two crossed anchors with an arrowhead piercing the anchors horizontally at their junction.

It was the combined skill of *Clymer's* assault boat crews and the close teamwork of the attack transport's crew that earned the distinction of winning the coveted award.

A unit of Amphibious Squadron Three, *Clymer* is capable of transporting and landing as many as 1500 assault troops and supplies on a beachhead.



NUCLEAR REACTOR—Super safe atomic reactor, designed to produce just enough power for flashlight bulb, will be used at Naval Post Grad School.

Safe Atomic Reactor

A super-safe atomic reactor, which produces just about enough power to light a flashlight bulb, has been installed at the Naval Postgraduate School, Monterey, Calif. It will be used to supplement the training program in nuclear engineering, nuclear physics and radiochemistry.

The new reactor, which requires less uranium than any other known reactor, is the first of its type—a low-cost, low-power model especially designed with safety in mind. Its core is sealed four times to prevent the escape of radioactive contaminants, and along with the normal interlocks, the core has a built-in thermal fuse. The core is surrounded by an aluminum can, a graphite reflector, a lead shield, a reactor tank and a shield tank.

In operation, the reactor has a power output of 100 milliwatts, which would be about enough to light a flashlight bulb if the reactor were converted to electrical power. However, despite this negligible output, the reactor performs many of the functions of larger types. And, when it is used along with a reactor simulator (analog computer), it will be possible to simulate the operating characteristics of a complete nuclear power plant.

It's No Moonshine

Navymen have always shown considerable interest in the moon and have talked about their moon-light maneuvers—but now they are talking to the moon. (Actually they've been talking to themselves, via the moon.)

Not only have Navy scientists made moon talk, but they say it—the moon—may be used as a radio relay station. This conclusion was reached after six years of experiments.

Regarded as the most significant discovery made by radar, this scientific breakthrough was the climax of a long-range Navy project to study the moon by radar.

Scientists from the Naval Research Laboratory began their current studies of the moon in 1951 when they discovered that, while the moon appears to be rough to the eye, it was comparatively smooth to radar waves, and may be used as a relay station for radio communications. (Other scientists' interest in moon-echoes goes back to the 1920s.)

Continued experiments at various low and high frequencies, including round-trip transmission of voice messages, have confirmed this conclusion, and indicate that communication can be carried on via the moon.

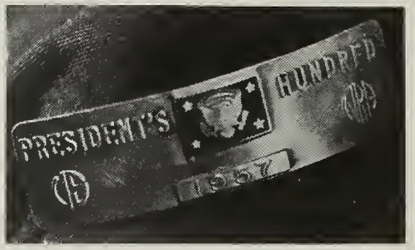
IN THE TOP 100—Joseph L. Galvao, GM1, USN, is one of the top hundred in President's Match, who are entitled to wear President's brassard award.

One of President's One Hundred

For scoring 143 out of a possible 150 with the regulation manually operated service rifle, Joseph L. Galvao, GM1, USN, of NTC Great Lakes, won the coveted Crescent Cup, which is awarded annually to the highest scoring naval officer or enlisted man in the President's Match during the National Rifle and Pistol Matches held at Camp Perry, Ohio.

In addition to receiving the Crescent Cup, Galvao is entitled to wear the President's Match metallic brassard on the left sleeve of his dress blue uniform (see above photo) and undress white "A" until next year's matches. This special brassard is awarded in the name of the President of the United States to the top 100 high-scoring competitors in the annual President's Match.

During this match, Galvao scored five bull's-eyes in registering his 143, just seven points less than a perfect.



NICE SHOOTING—VADM Holloway congratulates two top Navy marksmen, rifle champ J. L. Galvao, GM1, and national pistol champ W. H. Mellon, AD1.

Skyhook Balloon Shoots for Sun

A *Skyhook* balloon equipped with an automatic pointing mechanism and telescope-camera equipment has been launched on a trial flight (called Operation Stratoscope) in an attempt to test a new process for taking pictures of the sun. It is expected that the pictures to be obtained by this method will be much sharper than any ever taken of the sun.

After floating for four hours and 15 minutes at a predetermined altitude of 83,100 feet, the special light-sensitive pointing mechanism and photo instruments were parachuted to earth from the balloon.

For this test-flight only a dummy telescope-camera was used. But a working model of the new automatic pointing control mechanism was used to test its functioning in the upper atmosphere. The pointing control is about 12½ feet high, five feet deep, and five feet wide. Inside this frame are a number of highly sensitive instruments, including photo-sensors and mechanical clutches, which guide and aim the telescope-camera at the sun.

Before the development of the Stratoscope technique, photographing the sun through a telescope required the use of mountain top observatories in order to penetrate obstacles formed by the particle-laden atmosphere separating the telescope and outer space. The best way to solve this problem was to carry the telescope above the lower, denser layers of the atmosphere.

In the past, only turbulent eddies about 600 miles or more in diameter could be distinguished on the sun. The new photographs should reveal the true size of these giant eddies, as well as the smaller, local hot gas storms on the sun's surface. In this solar turbulence are found occasional solar flares which result in magnetic disturbances affecting the ionosphere and disrupting long-distance radio communication.

This launching was the first of a series under the project. The next step will be the launching of a balloon outfitted with a solar telescope equipped with a 35-mm. motion picture camera. The camera, photographing through the telescope at an altitude above at least 90 per cent of the earth's atmosphere, will take some 800 pictures of the sun in the three hours it will remain aloft.

Medics of 16 Nations Meet

Medical officers representing the navies of 16 NATO and SEATO nations complete a 60-day medical training program this month in the Naval Medical School at Bethesda, Md.

Thirty naval medical officers participated in the course conducted by the Navy on behalf of the Mutual Security Program. They represented the following countries which accepted invitations to send naval representatives: Norway, Italy, Japan, Korea, Peru, the Philippines, Taiwan, Thailand, Turkey, Cuba, Dominican Republic, Haiti, Vietnam, Chile, Mexico and Germany.

The visiting officers, divided into two groups, studied medical administration and preventive medicine. The studies were designed to develop mutual understanding in matters relating to recent advances in global medicine especially in the field of naval operations.

Field trips to military medical facilities in the Washington, D. C. area and the United Nations and World Health Organization in New York City were included in the program along with visits to the medical department at the Naval Academy; the Naval Medical Field Research Laboratory, Camp Lejeune, N. C.; Naval Hospital, Quantico, Va.; the U. S. Public Health Service Laboratories, Shamblee, Ga.; and the Naval Medical Center at the Pensacola Naval Air Station.

During these trips the training program participants were given an opportunity to visit various historical and cultural centers along the eastern seaboard. They were also given every opportunity to make first-hand contact with the American public.

Vega Feeds the Fleet Faster with VPC

The Navy is taking a tip from the banana freighters that ply the tropic routes.

For two years an experiment has been going on aboard refrigerator ship USS *Vega* (AF 59) with the vertical pocket conveyor—the VPC similar to cargo belts used on Caribbean banana freighters. Navy's VPC is not for moving bananas, but for all types of provisions.

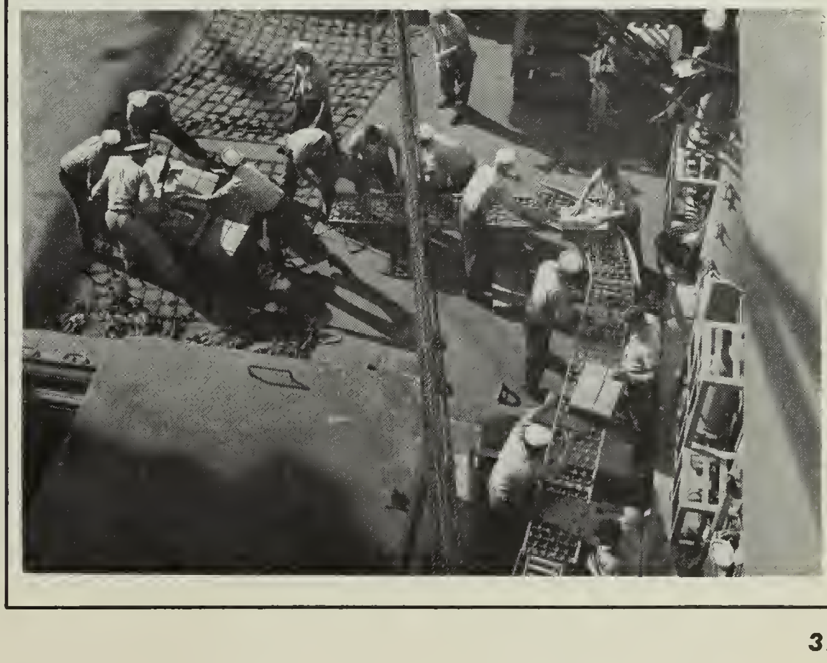
Here's how it works: Down in *Vega's* modern reefer holds, sailors load food crates into the free-swinging J-loops of the endless rubberized canvas elevator belt. This hoists provisions topside, where gloved hands shuttle the crates along new skate-roller slides into specially designed nylon tape cargo nets. When a net is full, the boatswain shouts, "Watch your heads!" and the load flies on highlines to a waiting combat ship.

With VPC, provisions are fed out of the ship's hold at a pace two or three times faster than the estimated breakout rate for conventional handling methods.

Aboard the ship taking on supplies the crates stack up faster than Christmas packages in a post office rush. One hold, equipped with the machine, moved 40 packages a minute, or 58 short tons of provisions in an hour, instead of the usual 15 to 20 tons an hour.

The VPC might well be *Vega's* answer to the need for efficient replenishment at sea. With it, one seven-and-a-half horsepower motor replaces the two 50-horsepower winches needed in the old system. A safety-stop pedal halts the belt with push-button emergency control. The new conveyor reduces the minimum time required to transfer cargo between ships, saves refrigerated air (since storage compartments need not remain open) and makes cargo selectively accessible without a pre-breakout of stores. The former, 24-hour, weather exposure of cargo stacked on deck to await transfer is eliminated.

USS *Vega* is the first ship in the Pacific to experiment successfully with the Navy's banana-belt system, which was developed at the Navy Supply Research Center, Bayonne, N. J. Plans are now being made for the permanent installation of VPCs aboard other refrigerator ships of the Pacific Fleet.



SERVICESCOPE

Brief news items about other branches of the armed services.

★ ★ ★

A NEW GENERAL PURPOSE MACHINE GUN has been adopted to replace the three machine guns now in use by the Army.

The new gun, known as the M-60, weighs 23 pounds as compared to the 32- to 42-pound machine guns. The ability of the M-60 to replace the heavier water-cooled machine gun stems from a barrel and gas system that can be replaced in a matter of seconds. In addition, the M-60 uses a chrome plated stellite-lined barrel that increases its fire power. The gun fires 600 rounds per minute, is 43 inches long, is air-cooled, gas-operated, and is fed by a disintegrating metallic-link belt.

Adoption of this weapon (and the T44 rifle) reduces the family of small arms from seven to two. On the way out are the standard M-1 rifle (Garand); the Browning automatic rifle, known as the BAR; the .30 caliber carbine; the M-3 sub-machine gun; the M1919A4 and M1919A6 air-cooled machine guns; and the water-cooled caliber .30 machine gun.

The new rifle and machine gun fire 7.62mm cartridges which will be common to NATO allies.

Engineering tests have been completed, and additional boats have been procured for troop tests.

★ ★ ★

AN IMPROVED VERSION of the *Nike* missile, *Nike Hercules,* is now undergoing its final tests.

Known as *Nike B* during its development stage, the Army's new missile is faster, has a greater range and can carry more destructive power than the earlier *Nike Ajax,* which has guarded key cities and strategic areas of the nation for the past three years.

Although longer, heavier and more than double the diameter of *Nike Ajax,* the *Hercules* model will have extreme maneuverability at altitudes far greater than those which *Ajax* can reach.

Through modifications in existing ground control equipment, *Nike Hercules* can be integrated into existing *Nike* batteries so that both *Nike Ajax* and *Nike Hercules* can be fired with the same system.

The equipment changes also improve *Nike Ajax.*

BIG BORE—Army's new earth auger can dig holes with record-breaking speed for storage and waste disposal.

THE QUARTERMASTER CORPS of the Army has come up with a new design to help their foot soldiers carry a 55-pound load with much more freedom of movement.

It is called the Individual Load Carrying System and involves a specially designed belt and shoulder-padded suspenders. The new equipment will be standard Army issue when stocks of the present strap buckle device for the pack are depleted.

Special bolt-type fasteners increase ease of attaching or removing components from the belt. The suspenders support the weight of the belt, other portions of the pack and a sleeping bag.

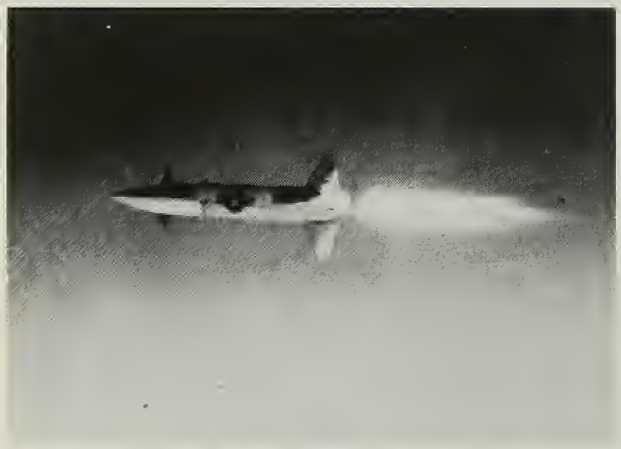
The sleeping bag carrier straps are secured to the front of the suspenders by snap fasteners so that the bag can be released and dropped instantly.

Based on top weight of 55 pounds for marching troops, the load can be divided into three segments:

A 20-pound load consisting of survival items essential to the combat soldier.

A 25-pound battle load of weapons and ammunition.

A 10-pound full field load for protection and comfort such as a sleeping bag, extra clothing and personal gear.



RASCAL, long-range rocket-powered missile, is built to be released in flight, proceed at high speed to target.

AIR FORCE'S new *Thunderchief* F-105 with needle-nose radar unit is latest thing in supersonic fighter-bombers.

Production models of the supersonic F-106A, described as the fastest all-weather interceptor ever flown, have been undergoing flight tests at Edwards Air Force Base.

The triangle-winged plane, nicknamed the *Delta Dart,* is the latest in the Air Force's Century Series of fighters. The new plane, equipped with the most advanced electronic fire control system and armament yet developed for an Air Force interceptor is designed to stop possible enemy air attack. Capable of stratospheric altitudes, the F-106A can seek out and destroy enemy aircraft in any kind of weather, day or night.

Like all true delta winged planes, the fighter does not have a horizontal stabilizer. Control is achieved through movable "elevon" surfaces in the trailing edge of the wing. The fuselage is over 70 feet long and bears a close family resemblance to the F-102A now operating with the Air Defense Command squadrons. Both planes feature the gracefully curved wasp-waist to conform to the area rule design first applied to the supersonic F-102A.

The rudder of the *Delta Dart* reaches almost 20 feet above the ground when the plane is resting on its tricycle gear. It is swept back, with a squared-off tip. Clamshell dive brakes are located at the base of the verticle stabilizer and all fuel is carried internally.

A two-place version of the new interceptor, designated the F-106B, is under development. It will carry the same armament and fire control system as the A-model and will differ externally only in the forward section of the fuselage which will have two tandem cockpits.

★ ★ ★

A new lightweight gas turbine engine, weighing approximately one-tenth as much as industrial diesel or gasoline engines of comparable performance, is now under development by the Army.

The engine, including accessories, weighs only 326 pounds. It is designed to meet the Army's requirement for a prime mover in a lightweight, high-speed, engine-generator set, and other applications where portability is important.

It is capable of producing 286 hp under favorable circumstances and 170 hp under adverse conditions. It is designed for 1000 hours of life between overhauls and maximum ease of maintenance in the field.

IN THE RED—Army men and tanks gain night mobility through infrared sniperscopes and tank searchlights.

Three small u.s. coast guard ships have completed the last link in the chain of surveys which has charted an ocean-to-ocean northwest passage for deep-draft ships. The trio—uscgc *Bramble* (WAGL 392), *Spar* (WAGL 403) and *Storis* (WAG 38)—ended their assignment at the western entrance to Bellot Strait.

Separating Somerset Island from Boothia Peninsula in north central Canada, the 12-mile long Arctic waterway borders the northernmost point of land of continental North America.

Lead ship of the Coast Guard trio, *Storis,* reported that the channel located from Shepherd Bay to Bellot Strait is at least 40 feet in depth.

Canadian and Coast Guard ships were assigned to the U.S. Navy's Military Sea Transportation Service, sealifting supplies to the Distant Early Warning (DEW) Line of radar stations stretching from Alaska to Baffin Island.

Prediction that Bellot Strait would be the key to a practical deep-draft northwest passage was made last year. An eastern exit has been sought for ships supplying DEW Line sites in the western Arctic. The escape route is required to prevent ships from being locked in the Arctic should the Arctic ice pack block the ships' return to the Pacific.

GLOWING PLACES—Afterburner of Air Force F-104 *Starfighter* lights up the night at Edwards Air Force Base.

THE WORD

Frank, Authentic Advance Information On Policy—Straight From Headquarters

• **NAVAL SECURITY GROUP**—Junior officers, including Waves, have an opportunity to submit applications for duty with the Naval Security Group.

Officers ordered to duty with the Naval Security Group will be required to serve a normal tour of duty in the area to which assigned. Billets for this duty are available within the continental U.S., as well as overseas. Preference for duty location will be granted whenever possible following choices indicated on latest Officer Data Card (NavPers 340) submitted.

The nature of this special duty, its specific objectives, methods and results are classified. Therefore personnel assigned must be carefully selected and individually approved.

In order to apply for this duty you must:

- Meet all the requirements for cryptographic clearance as outlined in OpNav Inst. 5510.37A of 7 Oct 1955.
- Demonstrate ability and aptitude in one or more of the following fields: Communications, electrical engineering, electronics, intelligence, languages, mathematics, and physics. You should give details of qualifications in application.)
- Be a LT or LTJG in the Regular Navy, including temporary officers and officers with aviation designators. (LTJGs normally will not be assigned to this duty unless they have completed a minimum of four years' sea duty.)
- Naval Reserve Line Officers in the grade of ensign through lieutenant may apply for assignment providing they agree in their application to remain on active duty for the prescribed length of time. Ensigns must have completed a minimum of one year of sea duty aboard ship before applying.

Restricted line officers of the Regular Navy, primarily limited-duty officers in administration and electronics, are also eligible to apply for this duty.

Requests for duty with the Naval Security Group should be submitted in accordance with BuPers Inst. 1331.2B approximately six months before the end of your current tour of duty. They should be submitted in duplicate, via official channels, to the Chief of Naval Personnel (Attention Pers B1133).

Endorsements should give recommendations regarding any marked aptitudes or abilities noted in the application.

One completed Personal History Statement (DD Form 398) and Fingerprint Card (OPNAV Form 5510-2) shall be forwarded with each application.

• **EARLY SEPARATION**—The program which started 1 Oct 1957, whereby Regular Navy, Fleet Reserve and Naval Reserve personnel are to be separated two months earlier than their normal expiration of active service, will be continued indefinitely. Details of the program are contained in BuPers Inst. 1910.15.

If you desire to ship over, you are exempt from the provisions calling for early separation provided you are fully qualified and recommended for reenlistment. Others not affected by the instruction are those being transferred to the Fleet Reserve or to the Retired List. If you are aboard a ship that is deployed, your commanding officer can delay your early release—but not beyond your EAOS—until the ship returns to the continental U. S.

If you entered the Navy through the Selective Service System, information regarding your early release is covered by other directives.

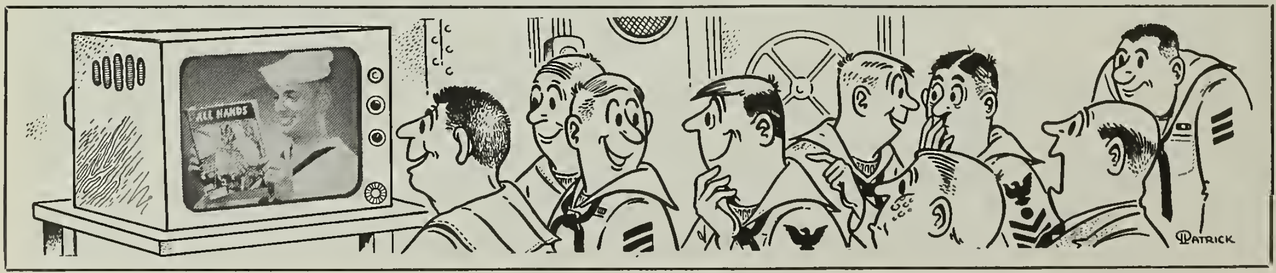
• **SPECIAL ELECTION IN ILLINOIS**—The 7th Congressional District of Illinois will hold a special election to fill a vacancy in the United States House of Representatives.

Date of the primary election will be 12 Nov 1957. The general election will be 31 Dec 1957. Armed forces personnel have absentee voting privileges (for details, see the June 1956 issue of ALL HANDS, pages 22-25).

• **ASIAN FLU SHOT FOR NAVY PERSONNEL**—The Navy's list of shots or inoculations available to the Navyman has reached a new high with the addition of a mandatory Asian flu shot now being administered to naval personnel.

World-wide distribution of the vaccine for Navymen began in September with operating force personnel scheduled to receive their shots from the first available vaccine. Crew members of ships participating in NATO exercises received their shots in August to combat the possibility of an outbreak of the disease in the cold-weather area in which the exercises were being held.

After all operating force personnel have received their shots the Navy will begin inoculating those attached to non-operating commands. When this is completed and if sufficient vaccine is available, an inoculation program on a voluntary basis will be started for dependents, retired personnel and Red Cross personnel on duty at Naval hospitals. When available the vaccine will also be administered to civilian employees overseas or engaged in care of sick or in auxiliary services in medical



THE BEST CHANNEL for up-to-date information: pass this copy on—there are nine other Navymen on this network.

facilities in the U.S. and for patients when recommended by their medical officer.

It has also been recommended that all prospective MSTS or MATS passengers receive the shots.

Inasmuch as the supply of vaccine immediately available is limited, the Navy will vaccinate intradermally (a method utilizing a smaller dose) enabling a larger number of personnel to be vaccinated, and considered to be equally effective. Later in the fall, when the supply of vaccine will be greater, booster doses will be given which will increase and prolong the protection.

The addition of the mandatory Asian flu shot to the Navy's list makes a total of 10 different inoculations available to the Navyman along with the usual cowpox vaccination. The list of shots includes protective inoculations against smallpox, typhoid, tetanus, diphtheria, yellow fever, typhus, cholera, influenza and polio. The first four are the standard shots given to all personnel and the following three are administered to personnel traveling to certain overseas areas. The last two shots listed along with the Asian flu vaccine are administered to provide protection from the related disease.

- **NAVAL AIR MOBILE TRAINING BILLETS**—Volunteers from five aviation rates are being sought for assignment to the Naval Air Mobile Training Program (NAMT) with headquarters at the NATTC, Memphis, Tenn.

NAMT furnishes field aviation activities with instruction on the latest equipment, practices, procedures and methods in aircraft maintenance and ordnance and munition equipment. The method for applying for duty with the organization is outlined in BuPers Inst. 1306.31B. You must be an E-5 or above in the AD, AO, AE, AM and GF ratings in order to apply.

To volunteer you must be serving on sea duty, including overseas shore duty, and have three years' obligated service upon transfer or agree to extend as necessary. If you have completed 17 and one-half years of active service or more, you must execute an agreement to remain on active duty for a period of 24 months from the date you report for NAMT duty.

In order to fill the instructor billets in the program you must, in addition to being able to speak clearly, work with others under supervision, exercise sound judgment, be military in bearing and show evidence of leadership ability and a desire to serve as an instructor. You must also have a clear disciplinary record throughout your entire naval career.

The required GCT score of 55 may be waived for otherwise qualified candidates upon the recommendation of your commanding officer. Your CO must also consider you a good security risk.

If selected you will be ordered to the NATTC in Memphis for 60 days of temporary instruction before receiving your first permanent assignment in the program. For this reason personnel are advised not to move their dependents until the permanent change of station orders are received.

NAMT duty is classified as shore duty for rotational purposes, but the frequent moves and periods of temporary additional duty which may be incurred require special procedures for the personnel assigned. The normal NAMT tour of three years may be extended to four if you request a one-year extension of shore duty at the end of 30 months of duty. At that time you may also request a one-year extension of shore duty and state four duty preferences or you may ask for a return to sea duty in either Fleet.

Your return to sea duty may also be requested upon completion of 18 months in the program. If approved, orders will be issued returning you to sea when you complete two years of duty.

There is a continuing need for qualified instructor personnel in the NAMT program.

- **RAD PAY FOR RESERVES**—Naval Reservists, recalled retired Fleet Reservists and Fleet Marine Corps Reservists will receive part of the money due them on the day they are released from active duty, and will get the rest later. This change in terminal pay procedure was made known in Alnav 42.

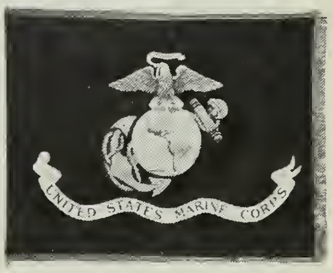
After you have completed your travel time, a check will be mailed to you for your unused leave, MOP, Reserve lump sum readjustment and separation pay.

However, the money you have in Navy savings and the interest it has accumulated, together with mileage, and pay and allowances for advance travel will continue to be made before departing your last duty station.

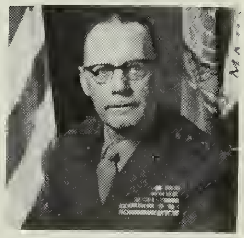
QUIZ AWEIGH

Since the Marines celebrate their birthday this month, let's salute them. Here are a few questions to see how much you know about the Leathernecks.

1. The Marines observe their birthday on 10 November because the Continental Marines were organized on that date in 1775. The Marine Corps, as we know it today, was permanently established as a part of the Navy by the Act of (a) 4 Jul 1776 (b) 11 Jul 1798 (c) 1 Jan 1868.

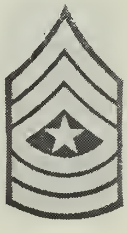


2. On the Marine Corps flag pictured here you see an eagle perched on the famed globe and anchor emblem with a streamer in its beak bearing the Marine Corps motto, "Semper Fidelis." It means (a) Always Faithful (b) Always Ready (c) By Sea and Land.



3. Here's a picture of the Commandant of the Marine Corps. He is (a) LTGEN V. E. Megee, USMC (b) GEN Lemuel C. Shepherd, USMC (c) GEN Randolph McC. Pate, USMC.

4. In rank, the Commandant of the Marine Corps is equivalent to (a) Vice Admiral (b) Admiral (c) Fleet Admiral.



5. This is the insigne of the senior enlisted man in the Marine Corps. He draws the pay and allowances of a CPO. He's a (a) First Sergeant (b) Master Sergeant (c) Sergeant Major.

If you are not gung ho! turn to page 47 for the answers.

THE BULLETIN BOARD

Requirements for Navymen Training for Duty in Nuclear Navy

If you've read the nuclear Navy News in this and previous issues, you should be aware that our Navy is fast becoming nucleonic. It offers you unlimited opportunities.

The shipbuilding program for nuclear powered submarines is continuing and the construction of nuclear powered surface units is about to begin. These programs will continue until all our combatant ships are nuclear powered.

To keep stride with this revolution, the Navy has launched an extensive nuclear training program for which you may volunteer for training and duty. (See pages 2, 7 and 32 in the June 1957 issue of All Hands.) This training and duty includes:

- Nuclear powered submarines
- Nuclear powered surface ships
- Army package power reactors

Enlisted men selected for duty in the engineering departments will receive a course of instruction in nucleonics and operational training for approximately one year and qualify as a Reactor Powerplant Operator before being assigned to a nuclear power plant or ship.

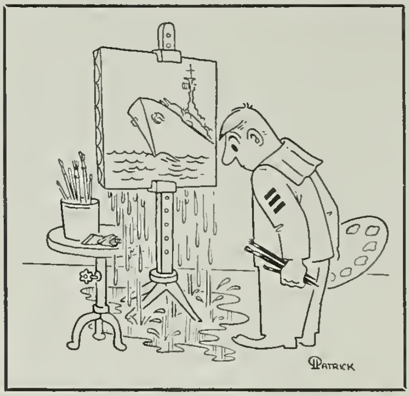
The development of the Army package power reactor has just started, and the Navy is participating in the program.

As stated earlier (SecNav Inst. 1000.3), individuals chosen for these programs will not only be given every opportunity for advancement, but also "will have enhanced their career opportunities."

Here are the eligibility requirements:

Submarine—Regular Navymen in MN, EN, ET, EM and IC ratings in pay grades E-3 through E-7 and HM in E-6 and E-7 only may qualify if they:

- Have a minimum of 40 months' obligated service or are willing to extend.
- Are designated as "qualified in submarines."
- Are physically qualified to meet requirements for submarine duty.
- Volunteer for the program.
- Have a combined ARI/MECH of 105.



Surface—Regular Navymen of the HM rating in pay grades E-6 and E-7, or of MN, BT, FP, MR, ET, IC, EM and EN ratings in pay grades E-3 through E-7, may qualify if they:

- Are no more than 30 years of age.
- Are volunteers for the program.
- Have a minimum test score in GCT, ARI and MAT/MECH of 55 each.
- Are high school graduates or GED equivalent.
- Are recommended by their commanding officers.
- Have a minimum of four years' obligated service, or be willing to extend their enlistment, or reenlist at time of reporting for instruction.

If qualified for nuclear powered subs, you may submit your request on the Enlisted Evaluation Report, (NavPers Form 1339) via your commanding officer, to the Chief of Naval Personnel (Attn: Pers B2131). Requests received will be reviewed and will be acknowledged as to the action taken.

It is estimated that approximately 150 men will be required for the nuclear surface ship program during 1958. Owing to this limited number, and in order to prevent long waiting periods for entry into this program, individual requests from surface ship personnel are not desired at this time. Current needs will be filled by personnel already on the waiting list. As requirements increase, applications from individual personnel on both shore and sea duty will be requested by a Bureau directive.

Training for submarine personnel is divided into two phases: basic and operational. The basic nuclear power course is conducted at the Naval Submarine School, New London, Conn., and is 21 weeks long.

Here, you receive a broad academic background in subjects related to the nuclear field and a knowledge of nuclear power plant construction, instrumentation, designed operation, and mechanical and electrical components.

The operational phase of the nuclear power submarine course is conducted at the AEC's prototypes in Idaho Falls, Idaho, and Schenectady, N. Y. This phase of the course is approximately 24 weeks long.

During this period, you apply the knowledge received in the basic course and, by practical operating experience, qualify for the duties to which you will be assigned. Your ultimate duty assignment determines which course you will attend.

Commencing in January 1958, basic surface and submarine classes for enlisted personnel will convene quarterly in January, April, July and October. All classes for officers will continue to convene semiannually in January and July. The first Army Package Power course is scheduled to convene in January 1958.

Training for surface ship personnel also is divided into basic and operational phases.

Both the basic and operational courses for nuclear surface unit trainees will be held at Idaho Falls, with instruction provided by contract engineers and naval personnel of the staff of the Naval Nuclear Power Training Unit. The scope of the instruction is the same as that for submarine personnel.

Training for Army Package Power Reactors will follow lines similar to those described above. This training is conducted by the Army under the auspices of the Atomic Energy Commission. Limited numbers of Construction Group VIII personnel will be ordered to training duty with the U.S. Army at Fort Belvoir, Virginia, for basic and operational instruction on the first nuclear package powerplant.

Each course will offer approximately six months of basic academic training followed by approximately six months of operational and maintenance training in the land based prototypes.

Certain qualified men, primarily in the EN, EM and FP ratings, will also receive highly specialized stainless steel welding training.

Complete details, including recommended study texts and courses, may be found in BuPers Inst. 1540.33A. The instruction also notes that experience to date has shown that a high GCT is not necessarily the most important requirement—it is the sincere desire to absorb the necessary fundamentals, the adaptability to new concepts of nuclear power, and the willingness to work that will insure success.

Cold Weather Medicine Course for Doctors, Corpsmen

The Medical Department correspondence course, *Frigid Zone Medical and Dental Practice* (NavPers 10997), has been completely revised and reissued under the title, *Low Temperature Sanitation and Cold Weather Medicine* (NavPers 10997-A), which is now available to Regular and Reserve officers and enlisted personnel of the Medical Department.

Included in the course is discussion of problems of water supply, sewage disposal and garbage disposal in cold climates; also cold weather medicine practice relating to cold injury, snow blindness, carbon monoxide poisoning, psychological problems and dentistry.

This course consists of three assignments, evaluated at nine points credit for purposes of Naval Reserve retirement and promotion.

Medical Department Reservists who previously completed NavPers 10997 will receive additional credit for NavPers 10997-A.

WHAT'S IN A NAME

"Fighting Fletcher"

This year, at Sasebo, Japan, USS *Fletcher* (DDE 445) took time out from her busy schedule with the 7th Fleet in the Far East to celebrate an occasion that meant a lot not only to *Fletcher*, but also to the entire Navy.

It was the 15th anniversary of *Fletcher*'s commissioning and at the same time the 15th anniversary of some of the fightingest ships to come out of World War II — the *Fletcher* Class destroyers.

Fletcher was commissioned on 30 Jun 1942 at Kearny, N. J., but her history goes back a long time before that. She was authorized by Congress in 1934 and designed in the late '30s. Her keel was laid in October 1941 and she was launched seven months later.

The sleek, new *Fletcher* Class ships, with torpedoes and five 5-inch guns, were destined to play a major part in rolling back the Japanese. Before the war was over, 175 of them had been launched, making them the largest class of DDs in the Navy. Nineteen of them went down in combat and another six were severely damaged, which gives a pretty good indication of the kind of action these ships saw.

The "*Fighting Fletcher*" received her share of war, too. Heading for the South Pacific in August 1942, she first drew blood by shooting down an enemy plane on 11 November off Guadalcanal. The next day five more enemy aircraft fell before her guns and on the night of November 13 — Friday the 13th — she took part in a free-for-all battle (Battle of Savo Island) at close range, described by Fleet Admiral King as one of the most furious sea battles in history. Tactics, formation and concerted action gave way to general melee as enemy and American forces plunged into each other's formations in the dead of night.

Out of this action only *Fletcher* emerged unscarred. Of the 13 American ships in the fight, six were sunk and six damaged. Among the enemy's losses was a large cruiser credited to the torpedoes of *Fletcher*.

In the nerve-wearing weeks following this battle each side strove to reinforce. For those ships which could steam and fight the load was heavy. *Fletcher* was one of them. On the night of 30 Nov 1942 she fought in the battle of Tassafaronga, where U. S. forces suffered heavy losses, but again she came through unscathed. On 11 Feb 1943, off Guadalcanal, she found and sank her first enemy submarine.

From Guadalcanal, *Fletcher* moved on to support the island-hopping campaigns in the Gilberts and Marshalls until finally, in December 1943, she steamed to San Francisco, Calif., for a well-earned rest and overhaul.

By February 1944 *Fletcher* was back on the job, sailing from San Francisco to the Marshalls and on to New Guinea, where she chased and damaged a Japanese DD in a running gun battle. She then moved to the Philippines, where she proved she could take it as well as dish it out.

On 14 Feb 1945, while she was steaming off Corregidor, a 6-inch shell from a hidden Japanese shore battery exploded as it ripped through her main deck, putting both forward guns out of action. Six men were killed instantly and fire broke out in No. 1 gun magazine.

The ship was in mortal danger when Elmer C. Bigelow, WT1, USN, picked up a pair of fire extinguishers and plunged into the burning compartment without wasting precious time to put on rescue-breathing apparatus. Despite the acrid smoke which seared his lungs so badly that he died the next day, he quickly extinguished the fires and prevented a magazine explosion . . . which undoubtedly, would have left his ship at the mercy of Japanese guns on Corregidor. For his heroism he was posthumously awarded the Medal of Honor. (A new destroyer, USS *Bigelow* (DD 942) now bears his name.)

When the war ended *Fletcher* had amassed 15 battle stars.

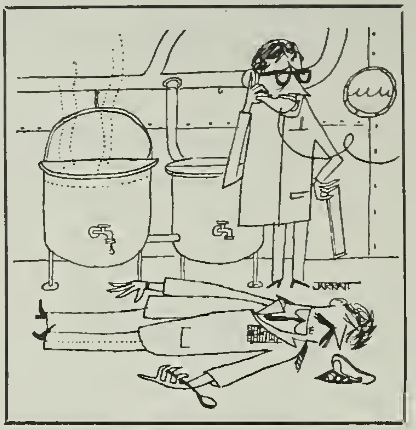
After the war larger, more powerful DDs began taking over the duties that she and her sister ships had performed so long and so well. In 1949 she was converted to a DDE, a new type of anti-submarine destroyer.

In that capacity, while earning five more battle stars in the Korean war, she proved once again that *Fletcher* is still a ship with a lot of class.

Are You in Seavey Segment I? Check Your Shore Duty Status

SEAVEY SEGMENT ONE, which becomes effective on 1 Feb 1958, will result in longer tours of normal shore duty for some of the top three grade petty officers in 17 different ratings.

Under Seavey, CPOs and first and second class petty officers in the YN, PN, and JO ratings will have 42 months of shore duty. Under the old plan they were ordered ashore for periods of three years. Increased to 30-month normal tours are BMC, QMC, SMC, RDC, SOC, TMC, MNC, MN1, MN2, GSC, GS1, GS2, ETC, ET1, ET2, IMC, OMC, SKC, DKC, DK1, DMC, DM1, and DM2. Petty officers in these ratings were formerly given 24 months of shore duty. Tours for telemen with yeoman NECs will be the same as yeomen of the same pay grade.



"Better cancel the rest of that mushroom soup, Sam."

The increases were made to insure maximum stability in operating units and yet maintain equitable rotation of personnel. However, your tour of shore duty will not be extended to a date beyond your current expiration of enlistment unless you agree to extend. After 15 Oct 1957 you must execute the extension agreement at least seven months before your active obligated service ends. After that point the tour completion date cannot be changed.

The new shore duty tours will apply only to personnel whose current tours expire on or after 1 May 1958. Tours are not increased for people who have never been to sea.

Personnel in 21 different rates will receive Segment One rotation data cards about 1 Nov 1957. However, shore duty orders under the old sea-shore rotation plan will continue to be issued until 15 Jan 1958 from the present waiting list.

If you are serving on overseas shore duty, or in a non-rotated unit and your tour of duty expires later than 15 months after the effective date of your Seavey Segment, you will not receive a rotation data card. Navymen serving on overseas shore duty whose tour expires after 1 May 1959 will receive their rotation data card in November 1958, provided their tour overseas expires before 1 May 1960.

According to BuPers Notice 1306, 5 Sep 1957, which outlines the new shore duty tours and Seavey Segment One procedures, rotation data cards will be mailed on 15 October for personnel in the following rates whose sea tours began in the month and year shown or earlier:

BMC	Dec. 1955
BM1	Dec. 1954
BM2	Dec. 1951
BM3, SN	Jun. 1951
QMC	Apr. 1956
QM1	Sep. 1954
QM2, 3, SN	Apr. 1954
SMC	Feb. 1956
SM1	Apr. 1954
SM2, 3, SN	Dec. 1952
RDC	Oct. 1955
RD1, 2, 3, SN	Sep. 1954
SOC	Oct. 1955
SO1, 2, 3, SN	Jan. 1955
TMC	Apr. 1956
TM1	May 1954
TM2, 3, SN	Oct. 1953
MNC, 1, 2, 3, SN	Apr. 1956
GMC	Dec. 1955
GM1	Sep. 1953
GM2, 3, SN	Jun. 1952
FTC	Mar. 1956
FT1, 2, 3, SN	Nov. 1954
GSC, 1, 2, 3, SN	Apr. 1956
ETC	Apr. 1956
ET1, 2, 3, SN	Dec. 1955
IMC	Apr. 1956
IMI	Feb. 1956
IM2	Dec. 1954
IM3, SN	Sep. 1954
OMC	Nov. 1955
OM1, 2,3, SN	Sep. 1954
*RMC	Nov. 1955
*RM1, 2, 3, SN	Jun. 1955
**YNC, 1	Oct. 1956
**YN2, 3, SN	Apr. 1956
PNC, 1	Oct. 1956
PN2, 3, SN	Apr. 1956
SKC, 1, 2, 3, SN	Apr. 1956
DKC, 1	Oct. 1956
DK2, 3, SN	Feb. 1955
JOC, 1, 2	Oct. 1956
JO3, SN	Apr. 1956
LIC	Apr. 1956
LI1	Nov. 1955
LI2, 3, SN	Jan. 1955
DMC, 1, 2	Oct. 1956
DM3, SN	Apr. 1956

*Including TE with RM NECs

**Including TE with YN NECs

All rotation data cards must be returned to the reporting PAMIs. If cards are not received for eligible personnel, the required information should be sent to the PAMI in a typewritten list or on blank cards which are provided. The lack of obligated service does not make a man ineligible for entry on the Seavey.

All personnel whose sea tour commencement date is in or before the month indicated above will be entered on the Seavey regardless of whether a rotation data card is returned on not. The PAMIs will inform commands of the duty preferences on file in the Bureau of Naval Personnel.

For a detailed explanation of both the Seavey and Shorvey programs, see the January 1957 issue of ALL HANDS, pages 28-49. This issue also shows how to fill your Seavey and Shorvey Rotation Data Cards.

We'll Miss the Pitter Patter — Bainbridge's Refrain

The old "Hup, Toop, Treep, . . ." accompanied by the sound of marching feet is beginning to leave hollow echoes at the Bainbridge Naval Training Center.

On 1 September the Center discontinued taking men recruits. By the first of next year, the Recruit Training and Administrative Commands at Bainbridge will close. It will mean a reduction in station military personnel from about 12,000 to approximately 4500.

Recruit training for women and the Service Schools Command at Bainbridge will not be affected.

Recruits undergoing training at the Center will continue until graduated. But since 1 September, all new recruits are receiving their training at either Great Lakes, Ill., or San Diego, Calif.

From the time the Center opened 11 Oct 1942 until the conclusion of hostilities on V-J Day, 14 Aug 1945, 244,277 recruits were trained.

On 30 Jun 1947 the Training Center was deactivated but, owing to the Korean crisis, it was reactivated 1 Feb 1951. From that time until the closing this year, more than 300,000 recruits received training there.

NOW HERE'S THIS

New Destructor

When USS *Fred T.* (for *Thomas*) *Berry* (DDE 858) makes a good will visit she really does the job up right. LT Efren Villegas of the Armada Republica Argentina attests to that, and his new born son is named after the DDE.

The Argentine Navy lieutenant was assigned to *Berry* as liaison officer during the DDE's visit to that country. He quickly made friends with officers and crew on board the "destructor" and, before long, the U. S. Navymen were bombarding him with quips about the imminent arrival of an offspring.

Villegas was so favorably impressed by the Navymen that when his baby was born he decided to name the boy Federico Tomas (the Spanish version of Fred Thomas) in honor of his many friends on board the American ship. He telegraphed the news to *Berry* and she responded with a telegraph reading:

> **"CONGRATULATIONS ON LAUNCHING OF FEDERICO TOMAS, A.R.A. X ALL BERRYMEN SEND WARMEST REGARDS TO NEWEST DESTRUCTOR."**

List of New Motion Pictures Scheduled for Distribution To Ships and Overseas Bases

The latest list of 16-mm. feature movies available from the Navy Motion Picture Service, Bldg. 311, Naval Base, Brooklyn 1, N. Y., is published here for the convenience of ships and overseas bases. The title of each picture is followed by the program number.

Those in color are designated by (C) and those in wide-screen processes by (WS). Distribution began in September.

These films are leased from the movie industry and distributed free to ships and most overseas activities under the Fleet Motion Picture Plan.

The Spirit of St. Louis (884) (C) (WS): Drama; James Stewart, Murray Hamilton.

Affair in Reno (885) (WS): Drama; John Lund, Doris Singleton.

Calypso Joe (886): Musical; Herb Jeffries, Laurie Mitchell.

Tarzan and the Lost Safari (887) (C); Drama; Gordon Scott, Robert Beatty.

The D.I. (888): Drama; Jack Webb, Jackie Loughery.

Dragoon Wells Massacre (889) (C) (WS): Adventure Drama; Barry Sullivan, Mona Freeman.

Kronos (890) (WS): Science-Fiction; Barbara Lawrence, John Emery.

Untamed Youth (891): Drama; Mamie Van Doren, Lori Nelson.

The Restless Breed (892) (C): Drama; Scott Brady, Anne Bancroft.

Garment Jungle (893): Drama; Lee J. Cobb, Richard Boone.

The Seventh Sin (894) (WS): Drama; Eleanor Parker, Bill Travers.

The Wayward Bus (895) (WS): Drama; Jayne Mansfield, Dan Dailey.

True Story of Jesse James (896) (C) (WS); Adventure-Drama; Robert Wagner, Jeffrey Hunter.

Enemy from Space (897): Science-Fiction; Brian Donlevy, John Longdon.

A Face in the Crowd (898): Drama; Andy Griffith, Patricia Neal.

Ten Thousand Bedrooms (899) (C) (WS): Musical; Dean Martin, Eva Bartok.

The Way to the Gold (900) (WS): Adventure Drama; Jeffrey Hunter, Sheree North.

The Midnight Story (901) (WS): Drama; Tony Curtis, Marisa Pavan.

Beau James (902) (C): Drama; Bob Hope, Vera Miles.

Calypso Heatwave (903): Musical; Johnny Desmond, The Treniers.

Naval Reactor Program Report Is Available from GPO

If you would like a first hand report on the nuclear Navy, you'll find some interesting reading in the hearings on the Naval Reactor Program conducted by the Joint Congressional Committee on Atomic Energy.

This detailed "inside" report—one of the most comprehensive published to date—contains testimony by RADM Hyman G. Rickover, USN, Chief, Naval Reactors Branch, Atomic Energy Commission, and Assistant Chief of the Bureau of Ships for Nuclear Propulsion; and other experts in the field of nuclear power.

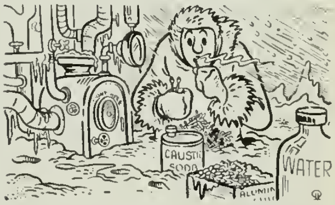
The report of the Congressional hearings is published in a 100-page pamphlet entitled "*Naval Reactor Program and Shippingport Project.*" It can be purchased for 30¢ from the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C.

HERE'S YOUR NAVY

To the 18 men at the Antarctic South Pole Station on the exact geographical bottom of the world, record low temperatures, sometimes dropping to minus 100 degrees Fahrenheit, pose many unusual problems. Of the 18 men, nine are Navymen performing logistics jobs and nine are civilians working on the International Geophysical Year (IGY) program.

They have crowded, warm headquarters in the station messhall where most of the weather observations are made automatically. But every three hours one of them makes a 100-yard trek into the Antarctic night to check temperatures and make sure that automatic equipment is working satisfactorily. And every 12 hours a hydrogen-filled weather balloon is launched from an inflating shelter at the far end of the camp in an attempt to record upper air temperatures, wind, etc.

One of the men makes this subzero walk to the shelter an hour or so before the "black noon" or equally "black midnight." His first task is to light off the gas engine heater, located outside the inflation shelter to prevent hydrogen explosions.



Next, the weatherman approaches the gas generator which resembles a vertical steam boiler. A mixture of 10 gallons of water, some caustic soda, and the addition of aluminum chips complete the gas making process. After much valve manipulation the balloon begins to fill the room.

Problems don't stop here. The balloon, dangling a radio transmitter by a piece of line, is released through eight-by-eight-foot trap doors in the roof. In spite of a plywood windbreak, it is not uncommon for the high Antarctic winds to rip the balloon to shreds as it clears the roof.

Once the balloon is safely in the air, weather information is telemetered to the weatherman snug once again in his headquarters in the messhall.

Here Are Ground Rules for Appointment as a Naval Officer

WANT TO MAKE officer status? Here are the ground rules. They describe the eligibility requirements for USN men and women who want to move up the ladder to a commissioned status in the Regular Navy through the Integration Program, LDO program, and the Warrant Officer program.

Appointments under the Integration and LDO programs are limited to line codes 1100, Supply Corps (code 3100), and Civil Engineer Corps (5100). Personnel appointed 1100 who apply for and complete flight training will be redesignated (1310). Appointment under the Warrant Officer program will be for the performance of duty in the technical field indicated by your rating.

You must agree (if eligible) that you will not apply for voluntary retirement before completing three years' service as a warrant officer.

Temporary LDOs will become eligible for permanent status when promoted to LTJG and remain eligible through the grade of LT. If you don't augment to permanent officer status, and so long as you serve satisfactorily and the needs of the service dictate, you may expect to remain in a commissioned status as temporary LDO at least until eligible for retirement. This will be in the grade you are serving at the time. But if you twice fail to be selected for promotion, you will be reverted to the status held at the time of selection to temporary LDO.

No matter which of the programs you apply for, you must meet physical requirements of the grade for which considered as established by the Chief, Bureau of Medicine and Surgery. Your transcript of service will be computed to 1 April of the calendar year in which your appointment could first be made. You must be on active duty at the time your application is considered by a selection board and remain on active duty until your appointment can be tendered. For the two years before the application is dated, you must have no record of conviction by a general, special or summary court martial, or conviction by civil court for any offense other than minor traffic violation.

Other eligibility requirements for the three programs are:

- ***Integration Program***—All service must be continuous in the Regular Navy and cover the period immediately before submission of application. Naval Reserve time is not acceptable. You must have at least one year of obligated enlisted service remaining upon entering the program or voluntarily extend for a year. Men must be at least 19 and under 32½ on 1 July of the calendar year in which the appointment can be made. On the same eligibility date required of men, women must be at least 21 and under 29½.

The program is open to CWOs, WOs, enlisted men and women. They must have three years in grade in either of these combined grades or rates. However, for CPOs, they can take this option or else they, and those enlisted below CPO, must have four years' service.

With the exception of appointment to CEC, all must successfully have completed 30 semester hours of work at an accredited college or university or have the service accepted equivalent as defined in *BuPers Manual*, Article D2103(14), or be a high school graduate or service-accepted equivalent with GCT or ARI score of 60 or above. CEC applicants must

HOW DID IT START

Early Ideas in Mothballing

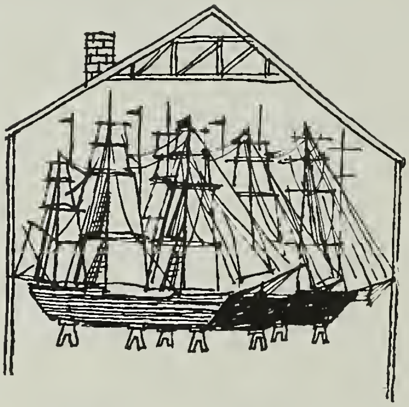
On 3 Mar 1801, the day before Thomas Jefferson was to become President, the Naval Peace Establishment Act was approved by Congress. It asked that, out of a total of over 30 vessels in service, 13 of the largest be retained and the rest sold. Of the 13 frigates to be kept on the Navy list, six were to "be kept in constant service in time of peace." The rest might be laid up "in ordinary." It was up to Mr. Jefferson to take care of this latter proviso.

The President had never heard of mothballing, but he did have a plan to preserve the ships. He suggested that the seven frigates not on active service be stored in the Washington Navy Yard, high and dry, under a great curving iron roof, safe from the elements. He figured that by doing this, the ships would be as sound at the beginning of another war as they were when they were laid up. If the ships were out of the water and covered with a roof, "they would last as long as the interior timbers, doors and floors of a house."

He had a precedent. A rear admiral of the Swedish Navy had reported that his country was planning to build a dock to contain eight ships of the line, in order to preserve them. The ships were to be washed throughout with fresh water, perfectly drained and open to circulation of air.

President Jefferson's dock would be large enough to hold 12 *Constitution* class frigates, three abreast. It would be about 175 feet wide and 800 feet long, with three acres of roofed-over drydock.

Further details of the plan called for the erection of two locks, each with a lift of 12 feet. Depth of the lower lock would admit a frigate of 23-foot draft. When



the outer gate was closed, the water level in the lower dock would be raised 12 feet; the upper gate would then be opened and the ship would be worked into the second lock. After the second 12-foot lift the ship could be admitted into the large basin with the rest of the vessels to be preserved and the water drained away. The keel blocks in the upper basin would be one foot above high water in the river.

There were, however, a few complications. The bottom of the Eastern Branch (Anacostia River) was muddy and not a very promising foundation for the first lock. In another area gravel was located for this foundation but it would require $10,000 for piling in the river.

After a period of brisk discussion, the drydock project was referred to a committee appointed "to inquire into the usefulness and property of constructing a dock or docks." The project died, and the first U. S. venture in mothballing ended.

have completed three years of college credits toward an engineering degree at an accredited engineering school.

- ***LDO Program***—Open only to male PO1s and above and temporary or former temporary commissioned officers who have completed 10 years' active naval service, including Marine Corps and U.S. Coast Guard (when operating as part of the Navy). All service must be exclusive of training duty in the Naval, Marine Corps, or Coast Guard Reserve.

You must not have reached your 35th birthday as of 1 July of the year in which the appointment can first be made. But for individuals who are serving in a temporary commission of LTJG or above, or who have previously served in a temporary commission of LTJG or above, the age limit is raised to 38. PO1s must have served one year in rate at the time of application. All applicants must be high school graduates or have the service-accepted equivalent.

- ***Warrant Officer (W-1)***—Open to enlisted men and women serving on active duty as CPO or PO1 in the Regular Navy. Must have completed six years of active naval service, including Marine Corps, and U.S. Coast Guard (when operating as part of the Navy). All service must be exclusive of training duty in the Naval, Marine Corps or Coast Guard Reserve. There are two age requirements:

1. Those who originally enlisted in the Navy, Naval Reserve, or Coast Guard (when operating under the Navy) before 15 Sep 1945, must not have reached their 39th birthday as of 1 July of the year following that in which application is made.
2. Those who originally enlisted after 15 Sep 1945, must not have attained their 34th birthday as of 1 July of the year following that in which application is made.

There are no special requirements regarding education.

Examinations

Examinations for all three programs will be held annually on 15 June or the next regular working day. They will consist of: general aptitude; military knowledge; and General Educational Level Determination composed of history, science, mathematics and English.

The Chief of Naval Personnel will establish a cutting score; all above it will be presented to a formal selection board convened by SecNav. Those below the cutting score will be considered disqualified. Eligible applicants will be considered annually in February. Results of the selection board's action will be promulgated by a BuPers Notice.

It is anticipated that it will take about 15 months from the date of initial application to process and appoint selected applicants. Warrant appointments will be issued according to the needs of the service.

Complete details on all three of these programs, including how to submit your application and what to put in it, can be found in BuPers Inst. 1120.18D.

Revised Flight Training Program Includes Changes In Obliserv Requirements

A program to phase out the early commissioning of Naval Aviation Cadets undergoing training, and the early designation of officer trainees as naval aviators by 30 Jun 1958, has been instituted by the Navy.

Formerly, NavCads received their commissions and naval aviator designators upon completing 10 weeks of advanced training. Under the new program the NavCads will be required to complete the entire advanced training program before becoming ensign USNR or second lieutenant USMCR aviators.

Officer students undergoing flight training will also be required to complete the advanced syllabus before having their designator changed to that of naval aviator.

This new policy is designed to permit the Navy's air arm to operate within current budgetary and manpower limitations. The program is being introduced gradually.

In order to receive his appointment to the grade of ensign USNR, or second lieutenant USMCR, a NavCad must have successfully completed the prescribed course of instruction in the advanced flight training syllabus and accumulated at least 200 hours of pilot time, 75 of which is solo or first pilot time.

In another move designed to strengthen the naval air arm under current limitations the obligated service requirements for certain graduates of flight training programs has been extended. All students except NavCads and Marine Corps personnel entering pre-flight, or already enrolled in the pre-flight or basic phase of flight training, will be asked to sign three and one-half year obligated duty agreements.

If the student does not elect to execute the agreement the following disposition of students in various categories will be made:

- NROTC (Regular) will be dropped from flight training and serve the remainder of their three year educational obligation as line officers.
- NROTC (Contract) will be dropped from flight training and serve the remainder of their two year obligation as line officers.
- ROC and OCS will be dropped from flight training and serve the remainder of their three year obligation as line officers.
- AOC (1395) will be dropped from flight training, designated 1355 officers and released from active duty upon completion of six months' active duty.

Marine Corps flight students will be covered by instructions to be issued by the Commandant of the Marine Corps. NavCads will continue to serve a total of four years from the date they report for training, but the Navy is seeking a change in the Public Law to increase the required service of NavCads.

This increase in active service time required following flight training will ease the load on the training "pipeline" and reduce the requirements for instructors. The Navy will also be able to increase the experience level of aviation officers.

Flight students not sufficiently motivated to serve three and one-half years of active commissioned service will be dropped from flight training making possible the retention of many senior USN(T) and USNR officers who might otherwise be scheduled for release.

QUIZ AWEIGH ANSWERS

Quiz Aweigh is on page 41

1. (b) 11 Jul 1798.
2. (a) Always Faithful.
3. (c) GEN Randolph McC. Pate, USMC.
4. (b) Admiral.
5. (c) Sergeant Major.

DIRECTIVES IN BRIEF

This listing is intended to serve only for general information and as an index of current Alnavs and NavActs as well as current BuPers Instructions, BuPers Notices, and SecNav Instructions that apply to most ships and stations. Many instructions and notices are not of general interest and hence will not be carried in this section. Since BuPers Notices are arranged according to their group number and have no consecutive number within the group, their date of issue is included also for identification purposes. Personnel interested in specific directives should consult Alnavs, NavActs, Instructions and Notices for complete details before taking action.

Alnavs apply to all Navy and Marine Corps commands; NavActs apply to all Navy commands; BuPers Instructions and Notices apply to all ships and stations.

Alnavs

No. 37—Directed attention of all Naval and Marine Corps personnel to the President's People-to-People program.

No. 38 — Stated that Navy and Marine Corps enlisted personnel, under certain conditions, may make a reelection of the type of bonus to be paid upon reenlistment if submitted before 4 Oct 1957.

No. 39 — Outlined schedule of priorities of immunization against Asian influenza for naval personnel, their dependents and certain other personnel.

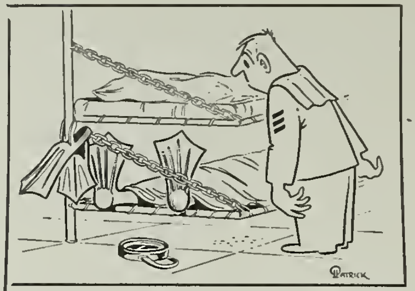
No. 40 — Announced the convening of selection boards to recommend staff corps officers on active duty (except TARs) for temporary promotion to captain and commander.

No. 41 — Announced approval by the President of the reports of selection boards which recommended USN and USNR male officers for temporary promotion to grade of commander and USN women officers for permanent promotion to grade of commander.

No. 42 — Orders disbursing officers to discontinue making certain payments to Reservists upon release from active duty. Payments are to be made by mail upon expiration of travel time.

No. 43 — Announced approval of the report of a selection board which recommended officers for temporary promotion to grade of brigadier general in the Regular Marine Corps.

No. 44 — Announced approval of the report of a selection board which recommended officers of Regular Marine Corps and Marine Corps Reserve for temporary promotion to grade of major.



No. 45 — Contained certain instructions for disbursing officers afloat.

No. 46 — Announced the convening of selection boards to recommend line officers on active duty (except TARs) for temporary promotion to the grades of lieutenant commander and lieutenant.

Instructions

No. 1050.2B — Provides information concerning the conditions under which enlisted personnel of Philippine or Guamanian extraction may be transferred to Guam or the Philippines for reassignment or visit those areas in a leave status.

No. 1120.15C — Outlines eligibilitiy requirements and processing procedures whereby qualified personnel may seek appointment to the grade of ensign (2300) in the Medical Corps, USN.

No. 1133.10A — Announces instructions regarding the reenlistment, extension of enlistment and voluntary retention on active duty of USNR enlisted personnel serving on active duty.

No. 1306.31B — Discusses the policy and procedures for the assignment and rotation of enlisted personnel to and from the Naval Air Mobile Training Program.

No. 1500.39 — Announces a revised issue of the *Catalog of U. S. Naval Training Activities and Courses* and provides instructions for its use.

No. 1540.33A—Provides information concerning the Navy Nuclear Power Training Program and tells how to apply for training.

No. 1910.15 — Directs the early separation of enlisted personnel serving on active duty.

No. 1920.8 — Outlines the procedures for appointment of commissioned or warrant officers resigning from the Regular Navy to commissioned or warrant grade in the Naval Reserve.

No. 5570.1A — Provides for safeguarding unclassified personnel test materials, which require protection as official Navy Department information.

Notices

No. 1120 (20 August) — Announced changes to the obligated service requirements for graduates of flight training programs.

No. 1331 (4 September) — Announced that applications from junior officers (including Waves) are desired for a tour of duty with the Naval Security Group.

No. 1742 (5 September) — Announced forthcoming special election in the State of Illinois.

No. 1306 (5 September) — Established the sea tour commencement dates for enlisted personnel to be placed on Seavey segment 1, which becomes effective 1 Feb 1958.

No. 1210 (5 September) — Invited applications from certain permanently commissioned line officers for transfer to the Supply Corps.

No. 1510 (8 September) — Discussed the type of maintenance training provided for Radarmen and Radiomen.

No. 1088 (9 September) — Announced Change No. 1 to BuPers Notice 1088 of 24 Jul 1957, which was concerned with the two-telegram system to notify next-of-kin of death.

No. 1120 (16 September) — Announced Change No. 3 to BuPers Inst. 1120.8A, which is concerned with appointment in the Optometry, Pharmacy and Medical Allied Sciences sections of the Medical Services Corps.

No. 1111 (17 September) — Announced Change No. 2 to BuPers Inst. 1111.4B, concerned with the nomination of qualified enlisted personnel for the NROTC program.

No. 1740 (18 September) — Transmitted Public Law 255, 85th Congress, for information. PL 255 authorizes settlement for losses in pay sustained by certain officers during 1932-34.

No. 1085 (23 September) — Furnished info on availability and effective date of the form Record of Practical Factors (Form NavPers 760) for certain rates and ratings.

New Law Now Authorizes Repayment of Loss Of Pay to Certain Officers

Any officer or former officer who was advanced in rank during the period 1 Jul 1932-30 Jun 1934, but did not receive an increase in pay or allowance owing to emergency economy legislation, may now file a claim for settlement of losses.

The repayment of these losses in pay was authorized by Public Law 255 of the 85th Congress, which was approved 2 Sep 1957.

According to the law, widows and legal representatives of officers who are deceased may also apply.

In general, officers or former officers whose original date of commission as ensign was earlier than 1 Jul 1931, and warrant officers who were advanced to chief warrant officer during the period 1 Jul 1932-30 Jun 1934 may be eligible for reimbursement under the act.

Applications for reimbursement under this act should be made in letter form to the General Accounting Office, Claims Division, 441 G St., N.W., Washington 25, D.C. They should be received by the Comptroller General before 2 Sep 1959.

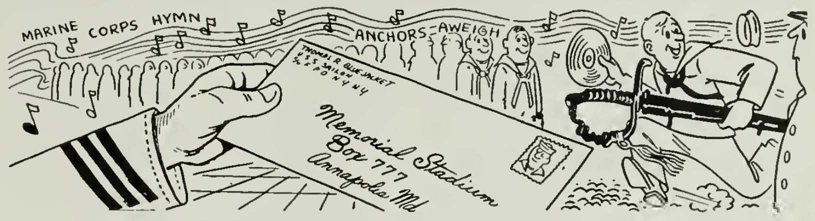
Each claim should contain the following information:

- Officer's complete name.
- Officer's file number.
- The rank to which advanced during the period 1 Jul 1932-30 Jun 1934.
- The date of such rank.
- The duty station(s) to which permanently attached during the period 1 Jul 1932-30 Jun 1934, including the dates attached.
- The address to which payment should be mailed.

Applications should be submitted directly to GAO and *not via the chain of command* and should cite Public Law 255 (85th Congress).

Applicants SHOULD NOT request the Chief of Naval Personnel to verify or furnish service record information in connection with their claims. If the Comptroller General requires record information upon applications under this Act, he will communicate directly with the Chief of Naval Personnel.

BuPers Notice 1740 of 18 Sep 1957 includes a reprint of Public Law 255 and pertinent information.



Step Right Up and Get Your Memorial Stadium Souvenirs

As the Navy-Marine Memorial Stadium world-wide drive continues, the total funds raised as of 1 October amount to $753,000. With the $1,000,000 available from the Naval Academy Athletic Association, this is sufficient to build slightly more than one-half the stadium. To complete the entire stadium $1,400,000 more is needed.

Many ships and stations continue to assist the drive by holding raffles, carnivals and benefits. Contributions from the Submarine Force Pacific Fleet now average $1.94 per man and Sub Pac thus holds Force leadership. USS *Lake Champlain* (CVS39) has closed the gap to $200 on USS *Hancock* (CVA19), the leader of the carriers with her contribution of $6500.

However, on a per-man basis, Fleet Tactical Support Squadron 24 at present tops the list with a total of $1506.06 from the 212-man squadron, an average of more than $7 per man. The sum was the culmination of various fund-raising activities by VR-24 personnel as they solicited donations from the entire base at Port Lyautey, French Morocco.

The VR-24 wives lent a hand, holding a bake sale that netted more than $250. As a reward for having collected the largest amount of contributions, totaling $242, Roland D. Sautter, AEM3, was awarded a four-day trip to London, England.

Afloat totals, as of 1 October:

Atlantic Fleet	$76,831
Pacific Fleet	65,861
Misc. Sea and Foreign	5,391
MSTS	4,142

Ashore totals were:

First Naval District	$ 7,676
Third Naval District	63,670
Fourth Naval District	50,098
Fifth Naval District	47,129
Sixth Naval District	16,867
Eighth Naval District	7,572
Ninth Naval District	34,415
Tenth Naval District	11,481
Eleventh Naval District	11,926
Twelfth Naval District	9,419
Thirteenth Naval District	1,481
Fourteenth Naval District	7,670
Fifteenth Naval District	188
Seventeenth Naval District	1,163
Severn River Naval Command	61,163
Potomac River Naval Command	17,265

Sponsors of the Fund have established a Christmas mail order service for two souvenirs. One is a sword-letter-opener which is given with a five-dollar donation. The sword (with scabbard) is a replica of the Navy sword. The other souvenir given with one-dollar donation is a record of "Anchors Aweigh" and the "Marine Corps Hymn." It is a 45 rpm record of a choral group and 45-piece band. You may send a check or money order to Memorial Stadium, Box 777, Annapolis, Md., for the number of souvenir gifts you wish. They will be mailed, with a gift card bearing your name, to any address in the continental United States, territories or possessions.

Summary of New Legislation of Interest to Naval Personnel

Here's a summary of the legislative action by the 85th Congress, first session, of general interest to naval personnel.

This roundup includes those measures which have received legislative and presidential approval and have been made a part of our Public Laws, as well as some of those which were introduced but on which final action had not been taken.

Public Laws

Gifts (PL 30)—Permanent authority for duty-free entry of gifts up to $50 in value for servicemen overseas.

Doctors and Dentists (PL 62)—Allows the President to issue special calls to active duty of physicians and dentists.

Active Duty Strength (PL 63)—Authorizes the armed forces to continue at a strength greater than the permanent ceiling of two million men.

Nurses and Medical Specialists (PL 155)—Increases the promotion opportunities of nurses and medical specialists. The average nurse may now reach the grade of LCDR during the course of a career and more nurses are authorized in CDR and CAPT grades. Nurses will serve on nurse selection boards. Mandatory retirement age will be lowered in some cases and nurses will be allowed to count all service (including Reserve time) creditable for pay purposes in computing retired pay. Limit on Medical Service Corps CAPTs is repealed and appointments placed in running mate system.

Test Subjects (PL 208)—Provides incentive pay of $110 a month for officers and $55 a month for enlisted personnel who serve as human test subjects in heat experiments.

Missing Persons (PL 217)—Makes the Missing Persons Act permanent and broadens its coverage to include inactive duty Reservists and others missing in the continental United States.

Substandard Housing (PL 241)—Provides authorization for military construction for fiscal 1958, including some troop and family housing. Includes provision to allow residence of substandard quarters to be charged on a rental basis without loss of full quarters allowance. Also requires that after 1 Jul 1958, all family housing units, including units built under the Capehart program, must be approved in a construction authorization bill. Units could still be financed with private money under the Capehart plan, but each project will have to be justified in an authorization bill.

Pay Loss (PL 255)—Authorizes settlement to officers who received no extra pay on promotion during 1932-1934.

Legislation Introduced

These bills were introduced but final action was not taken during the recent session of Congress (H. R. numbers and S. numbers indicate bills introduced initially into the House of Representatives and Senate, respectively):

Reserve Quarters Allowance (H. R. 3041)—Would pay basic allowance quarters to an enlisted Reservist on active duty for training at the same rates as paid to Regular enlisted men.

Limited Duty Officers (H. R. 6838)—Would increase the annual num-

LCU 11's Pete Is Up To Usual Monkeyshines

The talk of the Amphibious Force and the pride of Landing Craft Unit Division 11 is a monkey named Pete. Only a mite of a monk, Pete spreads morale all over the nine-ship LCU Division with his monkeyshines and capacity for monkey business.

Pete was originally given to *LCU 1481* of LCU Div 11 last March while the ship was in the Philippines, but he soon became affectionately attached to the whole division.

The first step in Pete's acceptance as a member of ship's company was a complete physical—probably the longest one in Naval history. The exam was delayed by difficulties encountered when the corpsmen tried to pin Pete down for his shots. His teeth were in excellent condition, a Navy dentist discovered when he failed to pull his fingers out of Pete's mouth in time.

A well-traveled monkey, Pete has visited Okinawa, Formosa, Korea, Japan, Wake Island, Hawaii and Hong Kong. He carries along his seabag, which holds three kimonos, a dozen diapers, pins and other essentials.

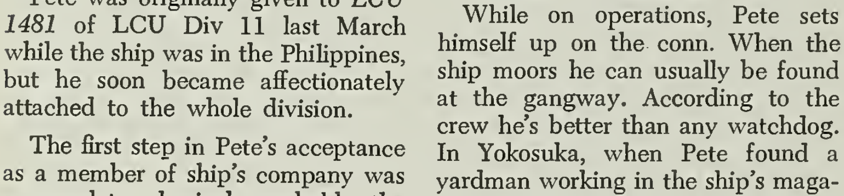
Pete is also a bit of a gourmet, and has sampled such exotic foods as shoe polish, soap, shaving cream and paint. In the process he discovered that paint doesn't agree with him. Neither do bananas.

While on operations, Pete sets himself up on the conn. When the ship moors he can usually be found at the gangway. According to the crew he's better than any watchdog. In Yokosuka, when Pete found a yardman working in the ship's magazine and mistook him for a trespasser, he let out a yelp that was heard from one end of the ship to the other. He is friendly to anyone in the uniform of the day, but adopts a wary attitude around people in civilian clothes.

Delos E. Hoffman, CS1, USN, who prepares Pete's meals, thinks him the best mascot a ship could have.

"It's a comforting feeling," he says, "when Pete suddenly swings onto your shoulder with his cold hands and feet."

By John Mullins, JO3



ber of Limited Duty Only officer appointments from 115 to 185 by increasing LDOs to 10 per cent of the total line officers.

Special Duty Officers (H. R. 2812)—Requested authority to eliminate the categories of photographers, psychologists and hydrographers and would create the category of aerology.

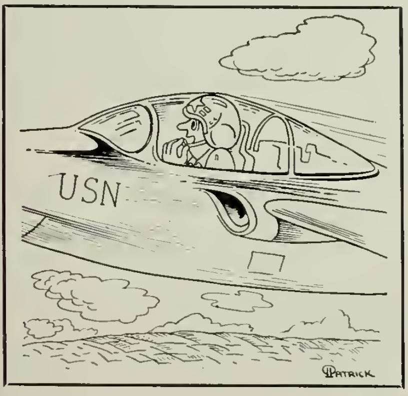
Hump Legislation (H. R. 8068)—Would relieve prospective heavy promotional attrition among officers of World War II year groups by early retirement of some senior officers. Selection of captains for continued service would occur after five years' service in grade. Commanders with 20 or more years' service would retire if twice passed over.

Deep Freeze Special Pay (S. 2871, H. R. 9331, 9332, 9337)—Would amend Career Compensation Act to provide special pay for Deep Freeze members.

Career Compensation Act (H. R. 7912)—Would authorize trailer allowance for surviving dependents.

Uniform Allowance (H. R. 5254)—Would authorize $300 uniform allowance to persons other than Naval Academy or NROTC graduates, appointed as commissioned or warrant officers in the Regular Navy.

Antarctic (S. 2189, H. R. 7869, H. R. 7913, H. R. 8055)—All similar, these bills would authorize the establishment of a new board or commission in the executive branch of the government to be known as the "Richard E. Byrd Polar (or Antarctic) Commission." Its job would include gathering, maintaining and publishing information about the polar regions. It would also engage in, and cooperate in exploration of these regions.



"Alfa, Charlie — This is Whiskey, Whiskey . . . Hic . . . Over!"

WAY BACK WHEN

Forty-Nine Years in Nipsic

It's not just the big ships that get around. The small boys, in bygone days and today often lead a varied and exciting life. USS *Nipsic*, for example, in her 49-year career, saw Civil War action, pulled duty in the West Indies and the South Atlantic, the Mediterranean and Prince Edward Island, rounded Cape Horn, survived a beaching during a Pacific hurricane, was rebuilt, cruised Hawaiian waters for several years, and rounded out her career as a receiving ship at Puget Sound.

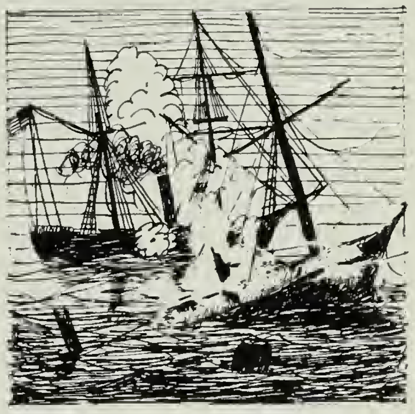
Commissioned early in 1863, *Nipsic* was a "screw steamer wooden gunboat with a fourth rate brigantine" classification. She was 179 feet, six inches long, with a 30-foot beam and a displacement of 592 tons. Her average speed was six knots, maximum speed, 11 knots. *Nipsic* was one of eight *Kansas*-class gunboats named for Indian names of places.

Commissioned 3 Sep 1863, she first operated with the South Atlantic Blockading Squadron off Charleston, S. C., and captured the schooner *Julia* while *Julia* was attempting to enter the Confederate port. *Nipsic*'s armament at that time consisted of one 150-pound rifle, one 30-pound rifle, two 9-inch Dahlgren smooth bores, two 24-pound howitzers and two 12-pounders.

After the Civil War, her job was to protect American commerce off the coast of Brazil and around the West Indies. In January 1870, she joined the Darien Expedition which was sent out to determine a route for a canal across the Isthmus of Panama. (See ALL HANDS, December 1956, pp. 59-63). She returned to Washington, D. C., in the summer of 1873 and was placed out of commission. Recommissioned 11 Oct 1879, *Nipsic* sailed once again for West Indian waters and followed this by a tour on the European Station. She left the East Coast of the U. S. in January 1888 for the Pacific Station, rounded South America and headed her bow for the Samoan Islands where she commenced duty as station ship.

During the evening of 15 Mar 1889 while *Nipsic* was riding at anchor in Apia Harbor Samoan Islands, winds of gale force started blowing. Also anchored were USS *Vandalia*, USS *Trenton*, the British ship HMS *Calliope* and German ships HIGM *Adler*, *Olga* and *Eber* as well as six merchantmen ranging from 25 to 500 tons.

By the next morning the anchorage was a mass of foam and spray as the wind increased. Of the three American Navy ships, *Nipsic* was the innermost. She had dropped three anchors and veered chain to full scope so as not to swing and collide with *Eber* and *Olga* which ware anchored nearby. At 0500 on 16 March, *Olga* swung into *Nipsic*, carried away the whaleboat, dinghy and the port railing of the poop deck. An hour later the German warship again collided with *Nipsic* causing considerable damage above the hull, the loss of part of the smokestack, the steam launch and the second cutter.



With no smokestack and little draft for the boilers, CDR D. W. Mullin, USN, *Nipsic*'s commanding officer, was forced to use pork in the furnaces to keep up steam for the bilge pumps. An effort was made to toss the forecastle gun overboard and use it as an anchor, but the project was abandoned as the starboard anchor chain broke and the warship started drifting toward the reef astern. CDR Mullin decided to beach the ship and save as many lives as possible. The port anchor chain was slipped and *Nipsic* was beached, bow first, in front of the American Consulate.

Pulled some 500 feet offshore, *Nipsic* had her engines repaired and left for Auckland, N. Z. Again heavy seas forced her return. The next day she left for the Hawaiian Islands where she was rebuilt from the *Kansas* class ship to that of an *Enterprise* class ship. This meant extending her length to 185 feet, her beam from 30 to 35 feet and her tonnage to 1375 tons. This cut her speed to 10.7 knots.

She cruised the Hawaiian Islands protecting American commerce and interests.

She entered San Francisco harbor 30 September and then proceeded to Mare Island Naval Shipyard where she was placed out of commission 2 Oct 1890.

In 1892 she was examined by a survey board, determined unserviceable for further warlike purposes and sailed to the Puget Sound Navy Yard where, among other duties, she was used as a receiving ship. On 11 Dec. 1912 *Nipsic* was stricken from the Naval Register.

Roundup on Living Conditions in the Med with the Sixth Fleet

Where do you prefer to live—Cannes, Juan-les-Pins, Antibes or Nice? Or does Villefranche or Beaulieu or Monaco sound more attractive?

This is one of the problems you'll face when you get orders to the Sixth Fleet—and may you and your wife never have a more serious decision to make than this.

To forewarn you, here's a rundown on living conditions in the Riviera, home area of the Sixth Fleet.

Details concerning the preparations for sailing such as passports, permission to enter the area, immunization, statement of health, travel orders, transportation of household and personal effects, luggage, embarkation and debarkation are similar to most overseas transfers. If you haven't already received advice regarding such matters, CinCNELM Inst. 1050.2b will give you a step-by-step account of procedures to be followed.

Shipment of Automobiles—Before you bring a privately owned vehicle into the Mediterranean area, permission must first be obtained from Commander Sixth Fleet. This can be done by a message or speedletter.

There are two methods of shipment. The first, and much to be preferred, is to deliver the car to the Naval Supply Center, Norfolk, Va., or to the Naval Supply Depot, Bayonne, N. J., for shipment to the Mediterranean via a ServLant AK. Normally, the car will then be offloaded at Villefranche.

Another method is to ship the car via MSTS from New York to a Mediterranean port (usually Naples or Leghorn). This method is only desirable if you are scheduled to travel via MSTS to these ports.

Autos shipped overseas should be in good mechanical condition. Locked gasoline tank caps are advisable and are required for MSTS shipment. Gasoline, machine oil, or masking tape on chrome surfaces will prevent rusting from salt water. The car must be completely empty except for tire-changing tools.

Before sailing, you should:

- Bring with you your registration card, title, and bill of sale.
- Insure your car through your local agent for foreign operation. This should include, at the very minimum, personal liability, fire and theft, property damage, and marine transportation insurance.

It is not necessary to obtain international registrations cards and driver's licenses in the United States before sailing.

Foreign Customs and Currency—Before leaving the United States, you should try to learn as much about foreign customs and currency as you can. The State Department is helpful. Many travel agencies also have up to date information.

To date, there have been no difficulties in taking personal effects and baggage from Italy into France. French and Italian regulations concerning the entry of cigarettes, tobacco and radios are strictly enforced. If you debark at Cannes, you should have no trouble with the customs if you identify yourself as U.S. Navy. If possible, wear your uniform.

Housing—Housing in the Nice Villefranche area is fairly critical the year round and extremely so between April and September. Some landlords will rent for terms running only during the winter months because of the large return they realize from tourists during the summer months.

The Housing Office of U.S. Naval Support Activity, Nice, maintains liaison with local real estate agents and will have a list of accommodations available. It is suggested that you contact this office as soon after your arrival as possible for information and advice regarding housing, rather than attempt to make the rounds yourself. If you write to the Officer-in-Charge in advance, he will try to make reservations.

"He says it's his and he wants it back!"

The following monthly rents are representative of what you may expect to pay on a 12-month basis (excluding utilities):

Apartment (1 bedroom, bath)	$65- 75
Apartment (2 bedrooms, bath)	85- 95
Villa (poor) or apartment (good)	95-110
Villa (good) or apartment (excellent)	110-120
Villa (excellent)	130-150

Some landlords or rental agencies may ask you to pay two or three months' rent in advance. You will be told of this when you contact the Housing Office.

In addition to the advance rent you will be required to deposit a sum usually equal to one month's rent, against breakage, damages, loss of owner's property and unpaid utility bills. When you move, you will be refunded this amount minus the damage which may have occurred during your occupancy.

In spite of this advice, be sure to ask the Officer-in-Charge, Naval Support Activity, Nice, for recent details of the renting situation.

Temporary Lodging Allowance—Upon your arrival you may receive a Temporary Lodging Allowance while seeking permanent housing. This is paid for a period not to exceed 60 days and only if the government quarters are not available and hotel or hotel-like accommodations are occupied. If traveling alone you will receive 50 per cent of the per diem travel allowance for France. If you travel concurrently with your wife, you will begin to receive upon arrival 100 per cent of the per diem allowance. Accompanied by two dependents you receive 125 per cent and three or more will bring you 150 per cent of the per diem travel pay.

If your wife arrives before you do she will receive the 50 per cent payment for the first 60 days or until permanent housing is obtained, whichever is the shorter length of time. Accompanied by one child she will receive 100 per cent, two children, 125 per cent, and with three the maximum 150 per cent payment.

The 60-day period begins on the day you or your family arrive in the homeport of the flagship. This Temporary Lodging Allowance is paid in addition to the usual dislocation allowance. Check with your disbursing officer to find out the per diem travel allowance for your homeport with the Sixth Fleet.

Station Per Diem—This varies with the country and whether you have dependents living on station. It begins after you find your housing. In France, the per diem runs like this:

- *Officers:* $3.00 per day for subsistence, plus $1.20 for quarters.
- *Enlisted:* $2.25 per day for subsistence, plus $.90 for quarters.

Utilities—Utilities are expensive at any time, and the cost increases in the winter. Coal costs about $50 per ton. It costs about $80 to $100 per month to heat most French villas during the colder months, regardless of the type of fuel you use. If you rent an apartment with gas heat, you will pay less than you would in a villa. The average cost for heating an apartment with gas is from $30 to $40 per month.

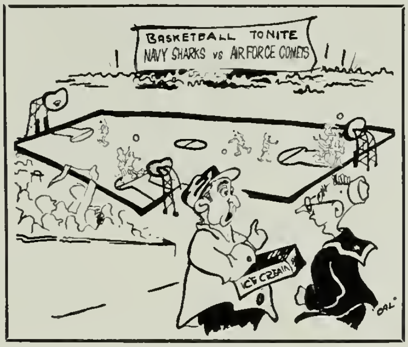
To be safe, confirm with the landlord and the utilities company the status of the utilities when you move in. You may encounter considerable difficulty in having your electricity, gas and water meter read the day you move but if you are insistent, it can be done. You'll be happier if you make an issue of it and insist. Have it clearly understood that, if you are expected to pay for the utilities, you will pay for them only from the time of entry until the time of departure. The same principle applies to your telephone service.

Domestic Help—Domestic servants who live in are available for $35 to $50 per month. They clean, cook, market, take care of the children and perform the daily routine household chores. The Welcoming Committee will aid you in finding your servants either by helping you place a "help wanted" ad in the newspaper or on the basis of personal information.

Part-time help is available at a reasonable cost.

Food—You may find the over-all cost of food to be higher than in the States. Many excellent fruits and vegetables are grown locally and, in season, are reasonable in price. Meats are expensive, with veal being the most readily available. Sea food is risky.

All-Navy Cartoon Contest, 1956
Calvin C. Brown, SN, USN



"This is one of the Navy's new improvement deals."

There is a ship's store with a commissary section in the customs building, Villefranche, near the Fleet Landing. It will supply only such non-refrigerated items as are not available on the local market. Other items can be bought at Navy establishments in Naples and Leghorn at the Army Post Exchange. Nice offers some good department stores.

Certain foodstuffs are available from the flagship stocks when the ship is in Villefranche. It is wise, though to live off the local items as much as possible and merely supplement your stock with the foods available in the commissary or from the flagship.

The local milk is not refrigerated but keeps fresh for a considerable time and is good. If available, of course, get that which is pasteurized and sterilized. The water is good and you need not worry about its purity.

Household Goods—As mentioned above, Nice offers some good department stores, and business places throughout the city are comparable to most of the cities in the United States which have a population of approximately 250,000.

Because of the difference in cycles of the local electric current, some of your electrical appliances will work differently than they did in the States. The electricity is 115-125 volts AC, 50 cycle. Most of your appliances will work adequately, but such items as phonographs and electric clocks (or any other gadget with an electric motor) will not operate at the same speed as they did Stateside.

Many houses are not equipped to handle modern U.S. clothes dryers.

Furnishings — Most houses and apartments are rented furnished. However, many are not so complete as you may have been accustomed to in the U. S. If you have any favorite pieces of furniture, bring them. Baby cribs, highchairs, refrigerators, deep freezers, vacuum cleaners, extra lamps, washing machines (not dryers), radio, serving dishes, flat silver, carving sets, extra glasses, sewing machines and gas or electric ranges have all proved to be useful items in the past.

If your wife sews, tell her to bring sewing equipment and pattern books. Material is available but expensive. Prices for cotton are very high.

As the temperature of the usual European house is maintained at a much lower average than in the States, you may want to rent or buy a gas or oil heater.

You may want to bring some of these items:

Blankets
Sheets
Pillows
Pillow cases
Table linen
Hot water bottle
Cards and games
Cook book
Measuring cups and spoons
Tape measure
Electric roaster
Tennis racket
Golf clubs
Special medicines
Camera
French-English Dictionary
Silverware
Favorite cooking utensils
Mail order catalogue
Iron
Ironing Board and covers
Coffee pot
Sponge mop
Dust mop
Small gas or oil heater
Oven thermometer
Clothes hangers
Rugs
Extra pair of prescription glasses

Do not bring electric clocks. You'll always be late for muster.

Radio Tax—France has a "use tax" on radios. Members of the Staff and Flag Allowance and officers and crew of the flagship must pay this tax, which amounts to 1500 francs a year.

Clothing — The climate on the Riviera is similar to that of South Carolina. The summers are comfortably warm and the winters, while generally mild by U. S. standards, are marked by cold nights and many damp and chilly days. No matter when you plan to arrive, bring adequate clothing.

Officers—The uniform of the day is Service Blue from October until

May. It is Service Dress Khaki the rest of the year. Service Dress White is required and you are advised to bring two or three sets with you. Bring plenty of uniforms as dry cleaning facilities are poor. Only pressing is available aboard ship.

The purchase of new uniforms presents a problem and you are advised to leave your measurements with a tailor at home. You can have your Service Dress Blues tailored here but the over-all cost is probably more than in the States. Working khaki is worn at sea during the summer months and may be obtained from small stores. Medals are worn when prescribed. Mess jackets and tails are not required. Swords are worn by those ranks requiring them.

Civilian clothes are appropriate on shore leave and informal civilian dress is appropriate while at home. Tuxedos and summer dinner jackets, while not required, are occasionally worn. If you have them, bring them.

Enlisted—Liberty uniform is Dress Blue with white cap during most of the year. White is worn all day during the summer months. Bring plenty of both, at least 10 pairs of whites.

Bring your civilian clothes if you plan to live on the beach with your family.

Dependents—Your wife will do well to bring along her entire wardrobe. Many wives have suits and dresses tailored locally of British woolens and Lebanese brocades, as women's tailoring is reasonable. However, for everyday use, most depend on the clothes bought at home.

Lingerie is expensive. Advise your wife to stock up on nylons and include one or two pairs of walking shoes. Shoes are expensive and often hard to find in the proper style and fit.

Bring heavy clothes for the family for the winter months. Riviera or not, it gets cold.

Automobiles — Bring your car, especially if you bring your family. Bus service is available between Villefranche and other outlying towns and Nice, but is sometimes irregular and often crowded. Taxis are expensive.

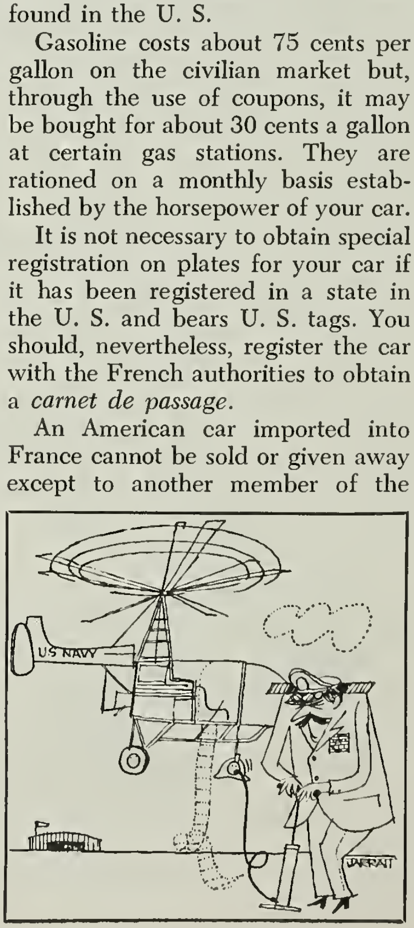
Filling stations with grease and oil change facilities are readily available. There are several American type auto dealers in Nice, Cannes and Monaco. You'll have no trouble finding repair service for your auto.

There are a number of small low-powered cars which may be bought either new or used at prices ranging from $800 to $3000. All purchases of cars by Americans are by American dollars and are tax free. However, if you buy this type of car, it cannot be resold on the local market. It must either be taken out of the country upon your departure or resold to another American for dollars. Time-payment plans are available upon terms comparable to those found in the U. S.

Gasoline costs about 75 cents per gallon on the civilian market but, through the use of coupons, it may be bought for about 30 cents a gallon at certain gas stations. They are rationed on a monthly basis established by the horsepower of your car.

It is not necessary to obtain special registration on plates for your car if it has been registered in a state in the U. S. and bears U. S. tags. You should, nevertheless, register the car with the French authorities to obtain a *carnet de passage.*

An American car imported into France cannot be sold or given away except to another member of the U. S. armed forces or a non-European tourist. The market is very limited and you should not be optimistic about selling your car.



Schools—There are no Navy-operated schools in the Villefranche area, but the Navy does provide an allotment of about $30 per child per month for schooling. These funds may be spent for tuition, registration, fees, books, school supplies, and correspondence courses. They may not be used for subsistence, room rent or clothing.

There are two elementary schools in which all instruction is in English. Instruction in all other schools is in French and, as a rule, the American children receive no special assistance to learn French.

Schooling will be a problem if you have teen-age children. Some parents send their girls to a private school in Cannes at a cost of about $75 per month. There is a private school in Nice for teen-age boys with instruction in French. American high schools which will accept your teen-agers as boarding students exist in both Germany and France and are tuition-free. Switzerland offers some fine private schools for both boys and girls but they are expensive.

There are no government funds available for nursery school expenses.

Finances—During the first two or three months in the Mediterranean, life will be expensive. While waiting for housing you will have to live in a *pension* which will cost about $10-$15 per day. If you buy a car, pay one month's rent on a villa or apartment (plus one month's rent as breakage), locate your youngsters in a school, and set up a household, you will be looking forward to payday more eagerly than usual. If at all possible, you should bring at least $500 along with you. The allowances you will receive, such as Temporary Lodging Allowance and per diem, may be delayed.

If you have a checking account, personal checks may be cashed by you or your wife at the American Express Company offices almost anywhere in France or Italy. Traveler's Checks can be cashed at American Express offices, banks and most hotels. It would be advisable to maintain a checking account at your bank in the States and carry on your banking by mail.

This Is The Latest Complete List of Navy Enlisted Ratings

As the techniques of naval warfare change, the Navy's structure also changes. New weapons, new ways to use these weapons and new ships require new skills.

On these pages *All Hands* presents the U. S. Navy rating structure as it stands today, with changes.

You'll find quite a few changes since a similar rating structure was presented in the July 1953 issue. In the Deck Group, for example, Boatswain's Mate B (Construction Battalion), Boatswain's Mate K (Canvasman), as well as Quartermaster Q (Quartermaster) and Quartermaster S (Signalman) have been eliminated and the General Service rating of Signalman has been added. Further changes may be found in almost every other Group.

ENLISTED RATING STRUCTURE

General Service Rating	*Emergency Service and Exclusive Emergency Service Rating*
GROUP I — DECK	
Boatswain's Mate (BM)	BMG—Shipboard BMS—Stevedore BMR—Rigger
Quartermaster (QM)	QM—Same as General Service Rating
Signalman (SM)	SM—Same as General Service Rating (QMQ and QMS ratings disestablished)
Radarman (RD)	RD—Same as General Service Rating
Sonarman (SO)	SOG—Sonarman SOH—Harbor Defenseman
GROUP II — ORDNANCE	
Torpedoman's Mate (TM)	TMT—Steam/Mechanical Torpedoes TME—Special/Electric Drive Torpedoes
Mineman (MN)	MN—Same as General Service Rating
Gunner's Mate (GM)	GMM—Mounts GMT—Turrets (Limited to grades E-6 and E-7 only) GMA—Armorers
Fire Control Technician (FT)	FTA—Automatic Directors FTM—Manually Controlled Directors FTU—Underwater FTG—Missile Guidance System FTL—Integrated Systems FTE—Electromechanical
Fire Controlman (FC) (Rating disestablished, but there are personnel still in general and emergency service ratings)	FCS—Surface Weapons FCU—Underwater Weapons
Guided Missileman (GS)	GS—Same as General Service Rating
Nuclear Weapons Man (NW)	NW—Same as General Service Rating ESX—Ordnance Projects Technician (9600-09) ESX—Powderman (9620-29) ESX—Ballistics Test Analyst (9665-69)
GROUP III — ELECTRONICS	
Electronics Technician (ET)	ETN—Communications ETR—Radar ETS—Sonar
GROUP IV — PRECISION EQUIPMENT	
Instrumentman (IM)	IMW—Watch and Clock Repairman IMO—Office Machine Repairman IMI—Instrument Repairman
Opticalman (OM)	OM—Same as General Service Rating ESX—Gage Specialist (9685-89) ESX—Crystal Grinder (9690-99)
GROUP V — ADMINISTRATIVE & CLERICAL	
Teleman (TE) (General and Emergency Ratings disestablished; personnel will convert to either RM or YN ratings)	TEL—Communications Clerk TEP—Registered Publications Clerk TET—Teletypist TEM—Mailman
Radioman (RM)	RM—Same as General Service Rating
Communications Technician (CT)	CT—Same as General Service Rating
Yeoman (YN)	YNT—Typist YNS—Stenographer YNM—Mailman
Personnel Man (PN)	PNI—Classification Interviewer PNT—Training Assistant PNA—Personnel Records Clerk
Machine Accountant (MA)	MA—Same as General Service Rating
Storekeeper (SK)	SKG—General Storekeeper SKT—Technical Storekeeper
Disbursing Clerk (DK)	DK—Same as General Service Rating
Commissaryman (CS)	CSG—Ship's Cook CSB—Butcher CSR—Baker (CSG, CSB, and CSR ratings for grades E-4, E-5, and E-6 only)
Ship's Serviceman (SH)	SH—Same as General Service Rating
Journalist (JO)	JO—Same as General Service Rating
No General Service Counterpart	ESE—Physical Training Instructor ESI—Instructor Miscellaneous ESF—Fire Fighter EST—Transportation Man ESW—Welfare & Recreation Leader ESU—Booker (Motion Picture Service) ESC—Chaplain's Assistant ESK—Telecommunications ESX—Fingerprint Expert (9670-74) ESX—Motion Picture Technician (9700-15) ESX—Radio Broadcasting Technician (9720-29) ESX—Archivist (9740-44) ESX—Librarian (9745-49) ESX—Intelligence Specialist (9755-59) ESX—Chart and Publications Man, Ashore (9783) ESX—Cable Censor (9794) ESX—Linguist (9800-89)

General Service Rating	Emergency Service and Exclusive Emergency Service Rating
GROUP VI — MISCELLANEOUS	
Printer (PI) (Rating disestablished, duties combined with LI, but there are still personnel in the general and emergency service ratings)	PI—Same as General Service Rating
Lithographer (LI)	LIP—Pressman
	LIT—Cameraman and Platemaker
Draftsman (DM)	DMS—Structural
	DME—Electrical
	DMI—Illustrator
	DML—Lithographic (Rating has been disestablished)
	DMT—Topographic
	DMM—Mechanical
Musician (MU)	MU—Same as General Service Rating
No General Service Counterpart	ESP—Photogrammetry Assistant
	ESX—Petroleum Production Man (9630-54)
	ESX—Laboratory Technician Miscellaneous (9655-59)
	ESX—Telephone Switchboard Operator (9730-35)
	ESX—Model Maker (9760-69)
	ESX—Plastics Expert (9780)
	ESX—Agricultural Worker (9785)
	ESX—Artist (9788)
	ESX—Fisherman (9790)
	ESX—Pigeon Trainer (9792)
GROUP VII — ENGINEERING & HULL	
Machinist's Mate (MM)	MML—General Machinist
	MMR—Refrigeration Mechanic
	MMG—Gas Generating Mechanic
Engineman (EN)	END—Diesel Engineman
	ENG—Gasoline Engineman
Machinery Repairman (MR)	MR—Same as General Service Rating
Boilermaker (BR) (Limited to grades E-6 and E-7 only)	BR—Same as General Service Rating
Boilerman (BT)	BT—Same as General Service Rating (BTG and BTR ratings disestablished)
Electrician's Mate (EM)	EMP—Power & Lighting Electrician
	EMS—Shop Electrician
Interior Communications Electrician (IC)	IC—Same as General Service Rating
Metalsmith (ME)	MEG—Shipboard Metalsmith
	MES—Sheet Metal Worker
	MEB—Blacksmith
	MEW—Welder
Pipe Fitter (FP)	FPG—Shipboard Pipe Fitter
	FPP—Plumber
	FPB—Coppersmith
	FPS—Steam Fitter
Damage Controlman (DC)	DCG—Shipboard Damage Controlman
	DCW—Carpenter's Mate
	DCA-ABC Defenseman
Patternmaker (PM)	Same as General Service Rating
Molder (ML)	Same as General Service Rating
	DESM—Underwater Mechanic

General Service Rating	Emergency Service and Exclusive Emergency Service Roting
GROUP VIII — CONSTRUCTION	
Surveyor (SV)	SV—Same as General Service Rating
Construction Electrician's Mate (CE)	CEG—General Electrician
	CEP—Power Lineman
	CEL—Communications Electrician
Driver (CD)	CD—Same as General Service Rating
Mechanic (CM)	CMG—Gasoline Engine Mechanic
	CMD—Diesel Engine Mechanic
Builder (BU)	BUL—Light Construction
	BUH—Heavy Construction
Steelworker (SW)	SWS—Structural Steelworker
	SWR—Construction Rigger
Utilities Man (UT)	UT—Same as General Service Rating
	ESX—Excavation Foreman (9781)
GROUP IX — AVIATION	
	GROUP IX—AVIATION
Aviation Machinist's Mate (AD)	ADP—Propeller Mechanic
	ADR—Reciprocating Engine Mechanic
	ADJ—Turbojet Engine Mechanic
Aviation Electronics Technician (AT)	ATN—Communications and Navigation Equipment
	ATR—Radar
	ATS—ASW
Aviation Electronics Man (AL) (Disestablished, but there are still personnel in the rating)	AL—Same as General Service Rating
Aviation Guided Missileman (GF)	GF—Same as General Service Rating
Aviation Ordnanceman (AO)	AOU—Utility
	AOT—Turrets
Aviation Fire Control Technician (AQ)	AQB—Bomb Director
	AQF—Aircraft Armament Control Systems
Air Controlman (AC)	ACR—Radar
	ACT—Tower
	ACW—Airborne CIC Operator
Aviation Boatswain's Mate (AB)	ABU—Utility
	ABG—Gasoline Handler
	ABA—Airship Rigger
Aviation Electrician's Mate (AE)	AEM—Electrician
	AEI—Instrument Repairman
Aviation Structural Mechanic (AM)	AMS—Structural Mechanic
	AMH—Hydraulic Mechanic
Parachute Rigger (PR)	PRS—Survival
	PRM—Maintenance (PRS and PRM in Pay Grades E-4 and E-5 only)
Aerographer's Mate (AG)	Same as General Service Rating
Tradevman (TD)	TDR—Repairman
	TDI—Instructor
Aviation Storekeeper (AK)	AK—Same as General Service Rating
Photographer's Mate (PH)	PHG—Cameraman
	PHR—Camera Repairman
	PHL—Laboratory Technician
	PHM—Microfilm
	PHA—Aerial Cameraman
Photographic Intelligenceman (PT)	
	ESV—Aviation Pilot
	ESA—Aircraft Carburetor Mechanic
GROUP X — MEDICAL	
Hospital Corpsman (HM)	HM—Same as General Service Rating

General Service Rating	*Emergency Service and Exclusive Emergency Service Rating*
GROUP XI — DENTAL	
Dental Technician (DT)	DTG—General
	DTP—Prosthetic
	DTR—Repair
GROUP XII — STEWARD	
Steward (SD)	SDG—Cook
	SDS—Stateroom Steward (SDG and SDS for grades E-4, E-5 and E-6 only)
GENERAL APPRENTICESHIPS	
Title	*Abbreviation and Pay Grade*
	Seaman Apprenticeship
Seaman Recruit	SR (E-1)
Seaman Apprentice	SA (E-2)
Seaman	SN (E-3)
	Fireman Apprenticeship
Fireman Recruit	FR (E-1)
Fireman Apprentice	FA (E-2)
Fireman	FN (E-3)
	Construction Apprenticeship
Construction Recruit	CR (E-1)
Construction Apprentice	CA (E-2)
Constructionman	CN (E-3)
	Airman Apprenticeship
Airman Recruit	AR (E-1)
Airman Apprentice	AA (E-2)
Airman	AN (E-3)
	Hospitalman Apprenticeship
Hospital Recruit	HR (E-1)
Hospital Apprentice	HA (E-2)
Hospitalman	HN (E-3)
	Dental Apprenticeship
Dental Recruit	DR (E-1)
Dental Apprentice	DA (E-2)
Dentalman	DN (E-3)
	Steward Apprenticeship
Steward Recruit	TR (E-1)
Steward Apprentice	TA (E-2)
Stewardsman	TN (E-3)
	Special Transitory Ratings
Officer Candidate	OC
Aviation Officer Candidate	AOC

Planning on Renting an Apartment or a House? Here are Some Hints

Sound advice is a commodity that is almost as precious as gold and in some cases where advice is not forthcoming or is not followed it may cost an unsuspecting Navy family some gold—particularly in the renting or leasing of apartments or houses.

The August issue of "JAG Journal," published by the Navy's legal office, contains some sound suggestions (prepared by LCDR N. S. Cole, Jr., USNR) on how to make your landlord-tenant relationship pleasant. According to the magazine, "when you rent without signing a lease you usually become a tenant from month-to-month and you cannot move nor can the landlord put you out, except for nonpayment of rent or creating nuisance, without giving the notice required by state law. This varies from state to state and should be checked. This does not mean that the landlord can physically restrain you, but it does mean that you can become liable to him for damages suffered as a result of your moving without proper notice and in some states he can hold your furniture until the rent is paid."

Navy legal officials said that notice periods vary in different states. For example they listed North Carolina which requires a seven-day notice and Virginia which requires a 30-day notice of moving. To be on the safe side they urged naval personnel to give a 30-day notice wherever they are living.

The magazine explained a lease as being simply a rental contract which binds you and the landlord just as any other contract. The fact that you are in the armed forces and receive orders requiring you to move does not release you from a lease unless there is a "military clause" in the agreement. Such a clause generally provides that, upon receipt of orders, the lease may be terminated by the tenant's giving a certain amount of notice to the landlord. If you break a lease without legal cause by moving before the end of the term, you will leave yourself open to being sued for damages. Again, states differ on the amount of damages, but they all recognize the right of the landlord to sue you. If the landlord is successful, you might find yourself paying rent in two places.

"It is advisable, then, to consider a number of things before signing your name to a lease. The rent of course, is a prime consideration. In areas near military installations rents are usually high. You may find it best to leave your family where they are while you look around. Don't forget that unless utilities are furnished you will have that cost in addition to your rent. The fact that after moving in you find that the total cost of living is so high you can't afford to pay it is not legal justification for breaking your lease.

"Inspect the property carefully. Generally speaking, except for hidden defects, the landlord rents 'as is.' Inquire about the neighbors, investigate play areas for the children, parking space for your car, location of schools, churches, bus lines and shopping centers. This place, whether it is a three-room apartment or a 14-room house, will be your home for a period of time. You can't always get exactly what you want, but shop around until you find something that looks as though it would be suitable. Dislike after you move in can make your homelife miserable, but can't break your lease.

"Read your lease carefully and don't sign anything you are not prepared to live up to. Make sure there is a military clause. If the landlord promises you something or agrees to waive a requirement, have it written in the lease or it will not be enforceable. If you have any doubts, seek advice BEFORE signing.

BOOKS: PLEASANT JOURNEYS OFFERED BY NAVY LIBRARY SELECTIONS

RECENT NAVY LIBRARY selections will take readers back to the days of World War II when Allied bombers roared off on impossible missions, aerial photo planes zoomed low over strategic targets and the tracks of sledge patrols crisscrossed Greenland. Journeys further into the past—when the harsh thump of the guns aboard Union monitors were a familiar sound and President Lincoln danced a jig after hearing of the first Union naval victory—may be made by readers of two new historical works concerning the War Between the States.

Included in the books on World War II is ***Low Level Mission,*** by Leon Wolff, which tells the story of operation "Tidal Wave," the air raid against the vital Ploesti refineries in Rumania. Some described the 1 Aug 1943 raid a total failure while others claimed it was a brilliant success. But no one disputes the magnificence of the performance of the crews of the 177 B-24 bombers.

NOW HERE'S THIS

Worth Picking Up

A mystery litterbug who throws trash around on the deck is helping to make USS *Franklin D. Roosevelt* (CVA 42) a neater and cleaner ship.

The first time the phantom struck he left several newspapers and paper cups on the second deck behind the MAA shack. Five men stepped over or around the trash before a passerby finally threw it in a trash can.

The next time eight FDR men stepped over or on the debris before someone picked it up.

On each occasion the picker-upper was awarded a five dollar prize from the ship's store for his efforts.

Now, thanks to the phantom, the men of *FDR* are a lot more particular about appearance, for who knows, "There may be gold in that there trash."

Wolff's story tells of this magnificent performance and relates the pros and cons of the attack. The raid was made at zero altitude in an effort to gain surprise. But because of accidents, mistakes and delays, the element of surprise was lost. The bomber force ran into a hornet's nest of 400 enemy fighters after making the 1350-mile trip to the target. Countless 88mm guns rained flak down on the planes as they dodged smoke stacks and barrage balloons.

Low Level Mission will give you an insight into one of the most famous aerial missions of World War II, the reason for it, the men who flew it and its results.

Another WW II book added to the Navy collection this month is ***Air Spy*** by Constance B. Smith. The author relates, with the authority of a veteran photo interpreter for the Allied Air Forces during the war, the role of photo intelligence in shaping the Allied victory.

After tracing the history of aerial reconnaissance, he launches into a description of the advantages it gave Allied forces in the early war years. Smith highlights its role in connection with commando raids and the bombing offensive, tells of the British watching the growth of the German Operation "Sea Lion," the planned invasion of England, and describes the courage of those who flew alone in unarmed planes to obtain pictures.

The Sledge Patrol by David Howarth unfolds another panel of the little known history of World War II, this one concerning one of the world's most barren areas, the northeast coast of Greenland. The 22,000 inhabitants of this Danish Colony resisted the Germans after Denmark fell to the Nazi forces, by protecting four vitally important weather stations located 700 miles beyond the last settlement.

To protect the stations, Greenland's governor organized a sledge patrol of 15 men, each with a dog team. This book relates their adventures as the weather installations pass from enemy to friendly hands in a little known phase of combat history.

The birth of the ironclad Navy is related in the two Civil War selections now available along with scores of other books through your ship or station library. ***Mr. Lincoln's Navy*** by Richard S. West, Jr., and ***The Rebel Shore*** by James M. Merrill tell the story of Union sea power, of Northern victories and defeats.

They tell of the campaign against the blockade runners and of the faith put in the Navy by its secretary, Gideon Welles. Both books cover the early development of the monitors, underwater mines, torpedo boats and the submarine. But each retains its originality. Merrill has included not only historical events, but also the excitment of Northern civilians over the capture of Mobile and the fears of the population of New Orleans as the Union Navy fought its way past forts and defenses and steamed up the Mississippi toward the city.

Richard West, a professor of history at the Naval Academy, notes the growth of the Union Navy from a force of 23 ships to 640 in *Mr. Lincoln's Navy.* He tells of President Lincoln whose personal interest in the success of the Navy was so sharp that he ordered daily progress reports telegraphed to the White House. West, who has written many other historical works concerning the U.S. Navy, closes his factual book by quoting Lincoln's words, "Uncle Sam's web feet" had been present "at all the watery margins . . . on the deep sea, the broad bay and the rapid river . . . up the narrow, muddy bayou and wherever the ground was a little damp, they had been and made their tracks. Thanks to all."

On the scientific literary side is ***The Age of Psychology*** by Ernest Havemann, prepared in terms that can be understood and enjoyed by the layman. He discusses psychiatry, psychoanalysis and psychology and has skillfully woven into a thrilling story, tales of the mind and its exploration.

Below the Salt is the latest in a long series of novels by Thomas B. Costain with the usual swashbuckling action taking place in 12th Century England. Within this framework, Costain has placed a story of chivalry, adventure and the social upheaval in England that led to the Magna Charta and Runnymede.

With Perry in Japan

Somewhat more than 100 years ago, Commodore Matthew C. Perry represented the United States in negotiations with Japan which resulted in the opening of that nation to commerce with the Western world. As a junior officer of USS *Macedonian*, 24-year-old passed midshipman John Glendy Sproston recorded his impressions of these conferences and the reaction of the Japanese to the visit of U.S. men-o'-war to feudal Japan

The 105-page manuscript A Private Journal of John Glendy Sproston *first came to light when it was purchased by the Library of Congress in 1926. The previous owner of the manuscript was not known and, since that time, it has not been possible to trace its earlier history.*

Macedonian *had sailed from New York in April 1853 and joined the Squadron in February 1854 at the American Anchorage in Edo Bay. Although Commodore Perry had given strict orders not to communicate with anyone in regard to the Squadron's movements, discipline or regulations, Sproston lost no time in recording the activities of the expedition.*

After a brief preliminary mention of the present visit, he began his journal with Captain Henry Adam's interview with the Japanese commissioners and closed it eight months later in Hongkong only because he had the opportunity to forward it to his family in Baltimore through a personal friend who was homeward bound. Enclosed with the rough draft of the manuscript was the note: "Sent in an unfinished state; will correct on reaching home, if I live."

Sproston did live through the Japan expedition and duty with the East India Squadron. He returned home in 1856 but did not have time to revise his journal.

On 28 Apr 1861, then LT Sproston was ordered to take command of USS Powhatan *for duty along the Virginia coast and inland waters. Later, he was transferred to* USS Colorado *and later to* Seneca, *one of the vessels of the South Atlantic Blockading Squadron, as executive officer. He was killed in June of the following year in Florida while in command of an expedition sent ashore to capture a Confederate captain.*

COMO Matthew C. Perry USN

8 Mar 1854, Yedo Bay, Japan

THIS DAY, if it be not hereafter remembered by our own, will at least be long kept in mind by the people of this country. The morning opened clear and pleasant with a light northeasterly wind which died away entirely in the latter part of the forenoon.

From *A Private Journal of John Glendy Sproston, USN*, edited by Shio Sakanishi. Published by Sophia University, Tokyo, 1940.

AMERICANS FACING Japanese Commissioners in private room seem to have difficulty sitting Japanese fashion.

In the morning watch, I noticed the Japanese erecting a fence from the landing to the House of Reception. This, I knew, was contrary to the express desire of the Commodore who stated to them that he would not land if they did so; a few minutes after, a gig left the flag-ship and pulled to the landing, which resulted in the fence being taken down.

At 11 AM, thirty boats belonging to the squadron pulled for the landing with Captain Buchanan leading in his gig (he having charge of the military proceedings of the day). Reaching the landing, [they] disembarked the Marines and armed seamen picked for the occasion.

About this time *Macedonian,* which had been sprung broadside to, fired a salute of seventeen guns. The Marine guard was drawn up on the left and the seamen on the right, leaving a space of about a hundred feet in between the two, forming two columns stretching from the water's edge to the entrance of the main building, with bands of music at each end—bass and small drums, fifes and so forth, arranged near the troops. The boats hauled off, anchored in what was intended to be a line 30 yards from the beach. In the middle of the line were 12 launches, each mounting a howitzer, intended for saluting.

THE SIGHT NOW was certainly a pleasing one. From the House of Reception, about 100 yards, sloping very gradually to the water's edge, were drawn up the troops as I before mentioned: The Marines, 160 in number, in full dress, their arms glittering in the sun; opposite to them the sailors, 224 in number in blue jackets and trousers, and blue caps with bands of red, white and blue, with stars worked in the blue stripe. Their arms consisted of musket, pistol and cutlass.

The white barge with the blue broad pennant now approached. As it passed the boats, the officers and men rose and took off their caps, a mark of respect. As soon as the Commodore landed, the drums rolled, the troops at the word of command from Major Zeland presented arms, the bands struck up the "Star Spangled Banner," and gunboats commenced saluting. The first salute was a national one of 21 guns, and the second a commodore's of 17 guns, or rather a minister's, for it was in that capacity that the Commodore appeared, being styled as the "Lord High Commissioner from America."

Preceded by the broad pennant, the pole of which was ornamented with a gilt battle-ax head, and followed by the officers composing the suite [with] six armed servants bringing up the rear, the Commodore passed up between the lines bare-headed, and entering the building disappeared from my view (my station being in charge of the boats from this ship).

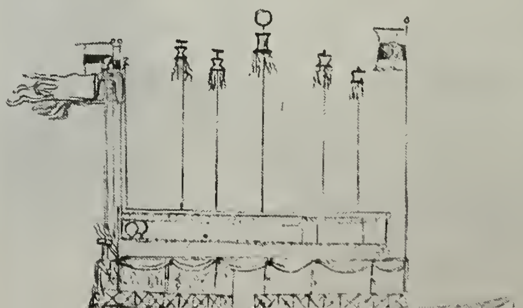
Being close to the shore and having a good spy-glass, I observed with ease everything that was going on outside. I saw them passing up and down the lines with cake and candy for the officers, who also made them distribute it among the sailors and soldiers. The two bands of music performed alternately, relieved by a strong muster of drums and fifes. The latter excited their curiosity very much, it being a kind of music which they could better understand.

The open space included about five acres, round which were erected canvas screens like their flags, with white, black and white stripes and diamond-shaped holes cut at regular intervals. Here and there for some extent a cord only denoted the line of demarkation, and here were assembled crowds of natives, most of them being servants, evidently, from their livery. Some were of blue with white strips of different shapes, others of a reddish color with lacquered hats, shaped or formed like those of the Chinese. Numbers of the outsiders would watch their opportunity and creep in to see the show, when the authorities, observing them, would attempt to seize them and the race that ensued reminded me of a militia training when the police officers are in chase of boys.

IT BEING NOW about 1 pm, I sent a boat ashore with the grog to freshen their nip. In the meantime, negotiations had commenced. The Commodore, attended by five officers and the Japanese Commissioner, followed by a like number, had retired to a private room to arrange preliminaries, while the remainder of the suite in the company of several princes and the Governor of Uraga (the place of the former conference) occupied the main building discussing the rather limited bill of fare, the principal viands being cold soup sweetened, snake chowder, mixed vegetables, cake and candy. Not being as yet able to speak from personal observation of the interior of the building, I shall not at present give any description of it.

About half past three pm, the drum sounded to quarters [and] officers and men resumed their stations. About a dozen Japanese conveyed a number of kegs and boxes containing *sake* and sweetmeats down to the landing. (Presents for the Commodore.) A few minutes after, several Japanese authorities passed along the line and entered their boats; these were followed in time by the Commodore, accompanied by the Commissioner.

ANOTHER of the sketches shows the Shogun's barge. Shoguns, had great power, were politically important.



Again the drums rolled, the escort presented arms, the bands sounded their martial strains. When the barge pulled from the landing, the men in the boats rose and doffed their caps, the officers saluted, then the boats were beached. The seamen, Marines, bandmen, having again been martialed in their respective boats and the line abreast reformed, the escort set out on its return in good order, and all expressed themselves well satisfied with the proceedings of the day.

On the following day, Captain Adams, fleet captain, met a deputation of the Japanese on board *Mississippi* and held a consultation. This was followed by several similar interviews.

March 23

ONCE MORE DID a visit of ceremony take place between the Commodore and Commissioners. I went in charge of our boats but without the howitzer. The men, however, were armed as usual. I had also another officer with me, who remained by the boat after the Marines were landed, thereby enabling me to see the procedings of the morning.

In the principal audience hall were displayed the presents from the Emperor of Japan to our Government. As I entered, the Commodore and Commissioners passed out to the open space in front where seats were ranged for their convenience, but for what I did not then know. Without delay, I entered the building and being at the time the only inmate of the room, had an excellent opportunity of closely examining the various articles spread out before me.

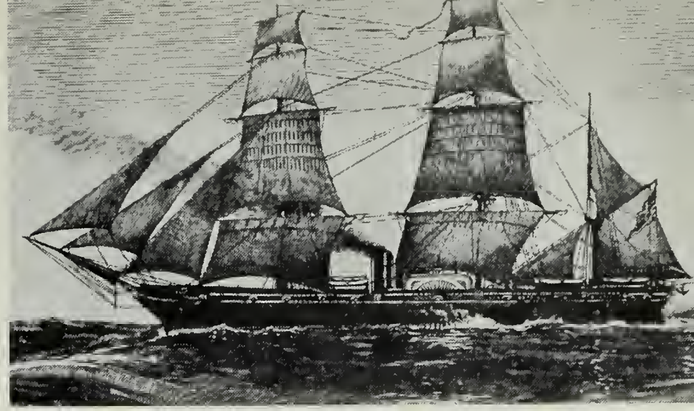
There were lacquered boxes of different sizes and shapes, embracing several varieties of style, the exterior of some being plain, the interior dark purple with gilding. Others had on the exterior raised metal figures of birds, some six inches in length and beautifully executed, also vines and flowers. Besides boxes, there were sets of small drawers supported in a stand, resembling a miniature wardrobe without doors in front. These were also gilt.

Then there were several low tables exactly like (in form, not material) the tables I had often seen used at Loo Choo by the scribes to write upon—they sitting cross-legged by them. These were ornamented like the boxes, except the figures were not raised. Covered cups, plates, saucers, cup stands and chow-chow stands completed the assortment of lacquerware, as well as I remember. Their quality was evidently superior and beautiful, excelling every other nation. I compared several articles of Chinese lacquerware with some procured at Loo Choo and found the former very inferior to the latter, which in its turn could be compared with a similar kind here displayed. Of the more beautiful varieties, no other nation can produce them.

The silk and crape department next attracted my attention. Both were of a pattern very similar to our own. The former wanted body, but the latter was very superior in style and texture. Besides the above-mentioned articles there were many others, some of which were packed up so I could not discover what they were.

Returning to the open space in front of the building, I found the officers and Japanese assembled witnessing the Marine guard drill, which they did very well. The maneuvering evidently astonished them.

THE MARINE DRILL OVER, the Chief Commissioner waved his fan and gave his order, when immediately some 25 or 30 Japanese, large, powerful and stout men, robed only in waist cloths, came forward and at the word of command each seized from a large pile two bags of rice, each weighing from 160 to 180 pounds, and carrying them a distance of about 300 feet, piled them up again. Then two or three of the stoutest, taking one of the bags and raising it up above his head, threw it up and, turning it at the same time, caught it at the other end. Another, again, raising it breast high, would turn a somersault lifting it with him as he rose again. The rice was then presented to the Commodore, who sent it off in the launches.



SIDE-WHEEL steamer *USS Powhatan* was Perry's flagship. Commissioned in 1851, it was considered Navy's best.

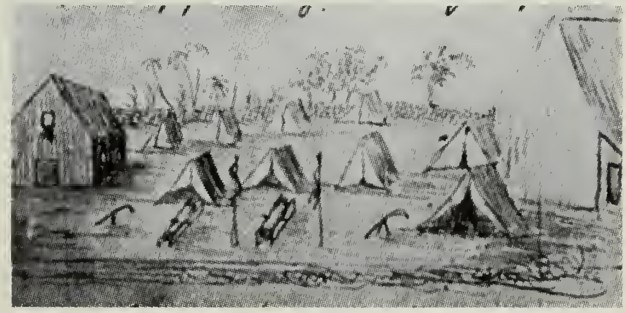
We then adjourned to the Treaty House. The paper-covered windows on one side had been drawn aside and seats arranged for the officers nearby. The ground in front had been cleaned and a ring formed. A Japanese official then took his station at one end and called off the wrestlers by pairs, who appeared upon the arena two at a time. After each round, they took a mouthful of *sake* and rubbed some salt upon their chests.

They first assembled together round the ring and went through a rather classical or gladiatorial pantomime, in which their large proportions appeared to advantage. Then they retired and the first two were called out.

They took positions at opposite ends of the ring and in a stooping position clasped their hands twice before them, then spread out their arms full length, after which they advanced into the middle of the ring and stretched their limbs then, stooping down with a short sharp cry, they closed in for the contest.

Their method of wrestling differed from our own in not using their feet, but confining their exertions to the muscular use of their hands and arms and butting with the head upon the chest and shoulders. In their respirations they would give forth a sound like "Hiss-hiss;" others reminded me of the words "Yes Sir."

ORNATE TENTS housed about a dozen Japanese soldiers. Military garb differed little from civilian clothes.



SPROSTON drew a rough outline of the squadron's position as it lay at anchor in the harbor of Shimoda.

When one of the combatants would be thrown or forced out of the ring, he would either return to the contests and make one or more efforts to overcome his opponent or, bowing his head as he assumed a half-stooping position, would thus acknowledge his defeat.

This exhibition over, we sat down to a chow-chow at which I demolished four or five dozen oysters with a splinter of wood for a fork, also eggs, fish, cake and candy and carried off, like the rest, the remnants of the feast in a piece of paper.

28 March

THIS DAY CLEAR with a strong northerly wind. Put our ship in prime order and dressed the crew in white frocks over blue. At 2 pm, the Japanese boats were seen approaching from the direction of the town. Three stopped at *Mississippi* whilst the fourth, containing the interpreter, pulled to our ship and he told us in very good English that the Commissioners requested that Captain Adams might be sent for to accompany them in their visits to the different ships. They were, I suppose, more accustomed to him than to other officers since, as flag captain, he had considerable intercourse with them.

The Commissioners having walked round the decks of *Mississippi* took their departure for our ship, and the officers assembled on the quarterdeck to receive them. The boats with the retainers first came alongside. They, assembling on each side of the gangway and bowing to the Commissioners on their hands and knees as they passed them, followed on behind. The boatswain piped and the Marine guard presented arms.

The Captain introduced the officers and then walked them round the spardeck, showing them the large ten-inch pivot guns, being larger than they ever saw before; but they betrayed very little astonishment. Then they visited the cabin and officers' apartments, gun and berth decks, and all the other parts of the ship, with which they were very much pleased.

We went to general quarters, exercised the big guns, called away boarders, pikemen, firemen, axemen, carbineers and pumpmen, going through the various evolutions with a great deal of spirit, and having evidently the desired effect upon them of convincing them of our power and force when occasion required.

THE EXERCISE BEING over, the Commissioners shoved off in their boats for *Powhatan* where they were to be entertained in a more substantial manner. Five or six officers from this ship, I among the number, then started in a boat for the flagship, which we found handsomely decorated with flags, and on the quarterdeck were ranged tables, or I might say a table, for they were placed so as to form one continuous display of delicacies, many of which I, for one, had not seen or partaken of for months.

The Commissioners had been examining the machinery, they having steam up and slowly revolving the wheels to show them the operation of the several parts of massive iron jointed together. What knowledge they possess of steam I cannot say, but I am told that the interpreter understands well the principal and motive power, and I should judge from their intercourse with the Dutch that they had informed themselves of the various discoveries in science and mechanism made heretofore by enlightened nations.

Having walked round the ship, they descended into the cabin with the Commodore and captains where they were, no doubt, well entertained. Their retainers remained on deck and joined us in the onslaught upon the numerous edibles there displayed. Champagne, sherry, port, whisky, punch and, in fact, every kind and quality of wine or liquor that came first to hand, satisfied their wants. a rather tall and gaunt Japanese that sat next to me drank them all and was, of course, rather merry afterwards.

31 March

THIS DAY has the treaty of amity and friendship been signed by the Commodore and Commissioners. Captain Adams sails with it for the United States in a day or two, taking passage as far as the Sandwich Islands in *Saratoga.*

4 April

SARATOGA set sail this morning and was cheered by the whole squadron as she stood out of the harbor, homeward bound. She still has half the world and stormy Cape Horn to encompass before she reaches her wished-for haven of rest and security.

11 April

IN OBEDIENCE to signal from the flagship, the squadron this morning got under way, the steamers leading, and stood out of the harbor of Kanagawa, bound we hardly knew whither. When about three miles from our former anchorage, we noticed that *Lexington* was aground. The Commodore sent *Vandalia's* launch to her assistance. When we had reached the middle of the Bay, signal was made and the squadron anchored. We had felt considerable curiosity as to whether we would go to Yedo or not, and the general opinion was that the Commodore intended to anchor as close to the capital of Japan as he could; and the fact of the wind being from the northeast, which was ahead, accounted for our anchoring without changing our destination.

But in the course of an hour or so we were again under way and standing down the harbor, anchored off Webster Island or, in other words, came to in the American anchorage. Naturally curious as to the reason of our apparently uncertain movements during the day, I enquired for an explanation from some of the officers of the flagship and received the following solution:

It was well known to all that the Commodore on the day the treaty was signed expressed to the Commissioners his intention of visiting Yedo. But they dissented, saying they had not the power to grant him the privilege, having no instruction on that point, and politely declined the offer of a passage in the steamers. The Commodore, however, reiterated to them his intention of doing so.

The next day we heard of the interpreters having said that if the Commodore went up to Yedo, they would commit the *Harikari.*

Now the steamers had, when first under way, headed up the Bay in the direction of a small island which we called Yedo Beacon, but that afterwards they had changed their course. The two Japanese boats towing astern convinced us that the interpreters were on board. From what we could learn, it appears that the one on board *Mississippi* actually became sick when he saw the course of the steamers, and when they were only a few miles from Yedo, commenced standing right up in the direction of that port. He threw his cloak and long sword to young [LT William] Speiden saying "take them, for I have no more need of them. My short sword will be all that I shall require."

18 April

WE HAVE NOW been at sea six days, having sailed the morning following our anchorage off Webster Island, bound to the Bonin Islands. We stood down the Bay of Yedo with steering sails set on both sides, and this time passed to the eastward of the main island, which is preferable both going and coming, as you have more sea-room in case of a gale springing up. The first three days out we experienced rainy, blowy weather, wind generally from the northeast. The weather being continually overcast, we were unable to determine our position every day, which was very much to be desired, as there is a regular gulf stream of strong current sweeping along the coast of Japan, of which but little is known.

Saratoga, when near the entrance to Yedo Bay, was swept to the northward and eastward and was there weeks [days?] working back. We experienced a heavy tumbling sea which made everyone seasick, at all predisposed that way. The air and water, taken every hour, differed from six to 10 degrees, the water being the warmer and in every respect the appearances were the same as we would have encountered in our own Gulf Stream, excepting in this case there was no gulfweed. This boisterous weather was succeeded by a calm which lasted 24 hours.

We had so far passed near to, but not in sight of, any of the numerous islands which abound in these seas, contrary winds having prevented us from doing so. They are all small and uninhabited, but as seldom any vessels but whalers visit these waters, the position of many of these islands as laid down on the chart must be incorrect; it is very necessary that any such mistakes should be corrected, as in all probability before many years, hundreds of ships will pass through these groups in the California and China trade.

17 May

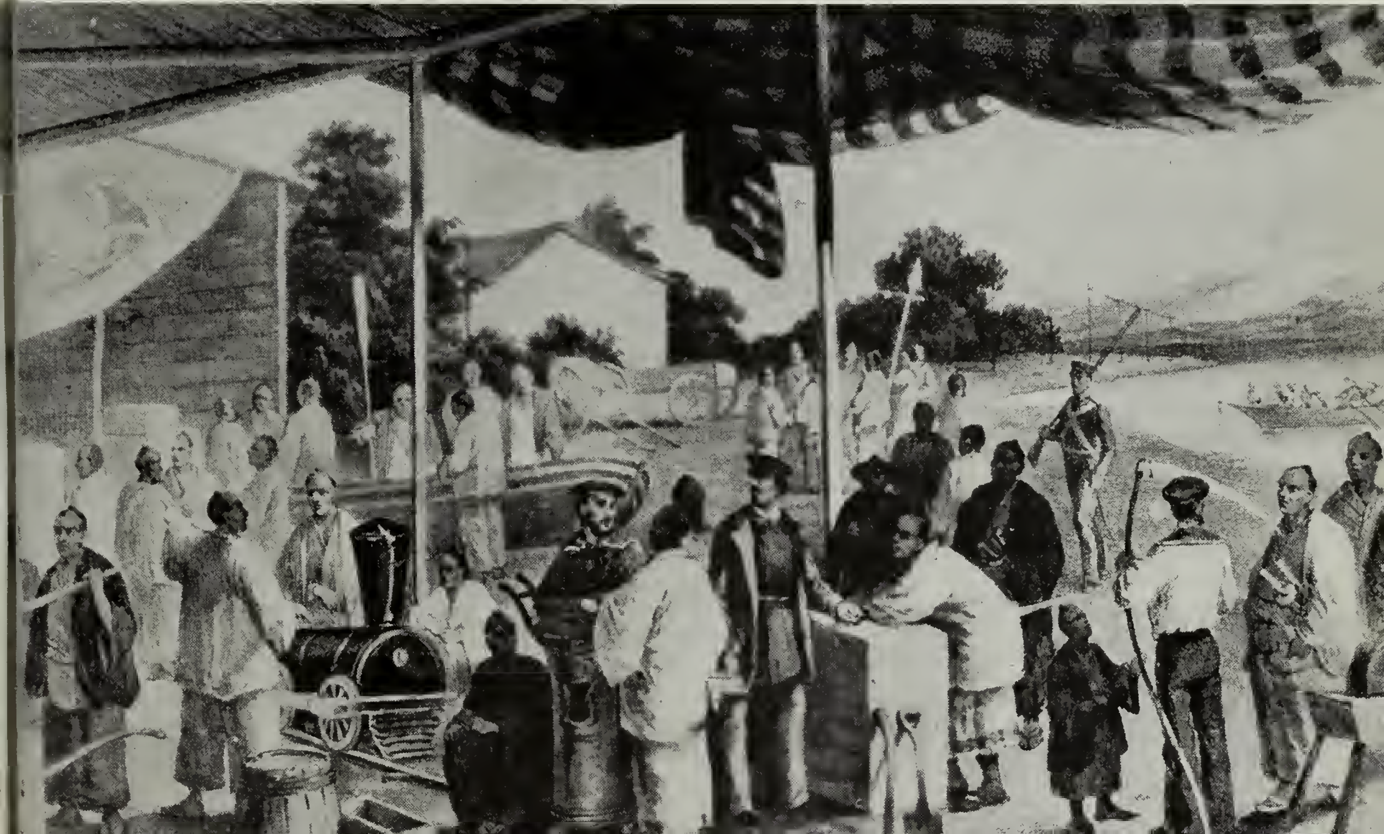
In the afternoon two sails were reported in sight from aloft which, on nearing them, proved to be whalers, both hoisting American colors, one a ship and the other a barque.

The barque passed close to us and hove to. We did the same, and the first mate came alongside in a whaleboat which, impelled by four long oars and steered by a fifth, fairly danced over the long heaving swell. He stated the barque to be the *Rambler,* six days out of the Bonins where they had been provisioning ship.

He said they were two years and a half out from the United States and had 500 barrels of sperm; they were then bound to the Japan Seas. We informed him of the existing treaty between the two countries and pointed out the commercial ports on the chart which were open to us.

[*The foregoing is an excerpt from the Sproston Journal, covering the section in which the author was in Japanese waters*—ED.]

'TOM THUMB' railway interested the Japanese most of all the presents and exhibits brought by Commodore Perry.



TAFFRAIL TALK

It used to make us feel pretty good when we heard the complaint that we don't put out enough copies of All Hands. However, we've just read an item that's caused us to wonder if this is really a tribute to our literary efforts. This editorial appeared in *The Antenna,* weekly newspaper of the Naval Radio Station, Cheltenham, Md.:

"Looking back over a month of publication, the Antenna can report that its impact on the station, while not explosive, has been generally favorable.

"Some of its most outstanding accomplishments can be enumerated as follows. It has:

"1. Provided a new and challenging game for Tuesday afternoons—finding the typographical errors and misspellings.

"2. Given housewives a firm yet absorbent household aid—for wiping up mud on the floor, or lining the garbage can.

"3. Made available a handy, reliable instrument, quickly folded, for swatting flies. Or, in a crumpled state, for practicing basketball shots at the burnbag.

"Of course, some people *read* the Antenna, and others even send it home to the folks or family—one use, incidentally, for which it was originally intended.

"At any rate it will continue, for the present at least, to provide news of the people and progress at Cheltenham. And being free, it may be the only good deal left since the five-cent cup of coffee went up to a dime."

Before we had a chance to recover from this blow to the editorial ego we came across something that hit even closer to home—one of the offices here in this Bureau was using a bundle of outdated All Hands as a doorstop. (Actually they considered the magazines, even old ones, too valuable to throw away. They finally located a unit library that was only too glad to take them off their hands.)

Somehow, we can't bring ourselves to believe that housewives really line their garbage pails with the immortal words of wise Navy scribes, at least not until after they've read them.

★ ★ ★

We feel a little better since we've gotten all this off our chests, but we still have a few more lines to fill. So, we'll tell you a second hand sea story. During fueling operations for some DDs off the Philippines the Boatswain's Mate of the Watch on board uss *Hornet* (CVA 12) sounded his pipe over the PA system, then solemnly announced: "Now the smoking lamp is out throughout the ship while destroying refuelers."

Wish we'd been there. We've never seen a boatswain's mate blush.

The All Hands Staff

The United States Navy

Guardian of our Country

The United States Navy is responsible for maintaining control of the sea and is a ready force on watch at home and overseas, capable of strong action to preserve the peace or of instant offensive action to win in war.

It is upon the maintenance of this control that our country's glorious future depends. The United States Navy exists to make it so.

We Serve with Honor

Tradition, valor and victory are the Navy's heritage from the past. To these may be added dedication, discipline and vigilance as the watchwords of the present and future. At home or on distant stations, we serve with pride, confident in the respect of our country, our shipmates, and our families. Our responsibilities sober us; our adversities strengthen us.

Service to God and Country is our special privilege. We serve with honor.

The Future of the Navy

The Navy will always employ new weapons, new techniques and greater power to protect and defend the United States on the sea, under the sea, and in the air.

Now and in the future, control of the sea gives the United States her greatest advantage for the maintenance of peace and for victory in war. Mobility, surprise, dispersal and offensive power are the keynotes of the new Navy. The roots of the Navy lie in a strong belief in the future, in continued dedication to our tasks, and in reflection on our heritage from the past. Never have our opportunities and our responsibilities been greater.

ALL HANDS the Bureau of Naval Personnel Information Bulletin, with approval of the Bureau of the Budget on 23 June 1955, is published monthly by the Bureau of Naval Personnel for the information and interest of the naval service as a whole. Opinions expressed are not necessarily those of the Navy Department. Reference to regulations, orders and directions is for information and does not by publication herein constitute authority for action. All original material may be reprinted as desired if proper credit is given ALL HANDS. Original articles of general interest may be forwarded to the Editor.

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The Bureau should be kept informed of changes in the number of copies required.

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- AT RIGHT: HIGH BOW — Deck gang of USS *Worcester* (CL 144) tend to their charge high above pier level while moored at Long Beach Naval Ship Yard.

14

careers of the future in the

NUCLEONIC SUPERSONIC ELECTRONIC NAVY

ALL HANDS

THE BUREAU OF NAVAL PERSONNEL INFORMATION BULLETIN

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In this issue
PROJECT
VANGUARD

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DECEMBER 1957

ALL HANDS

THE BUREAU OF NAVAL PERSONNEL INFORMATION BULLETIN

DECEMBER 1957 Nav-Pers-O NUMBER 491

VICE ADMIRAL JAMES L. HOLLOWAY, Jr., USN
The Chief of Naval Personnel
REAR ADMIRAL K. CRAIG, USN
The Deputy Chief of Naval Personnel
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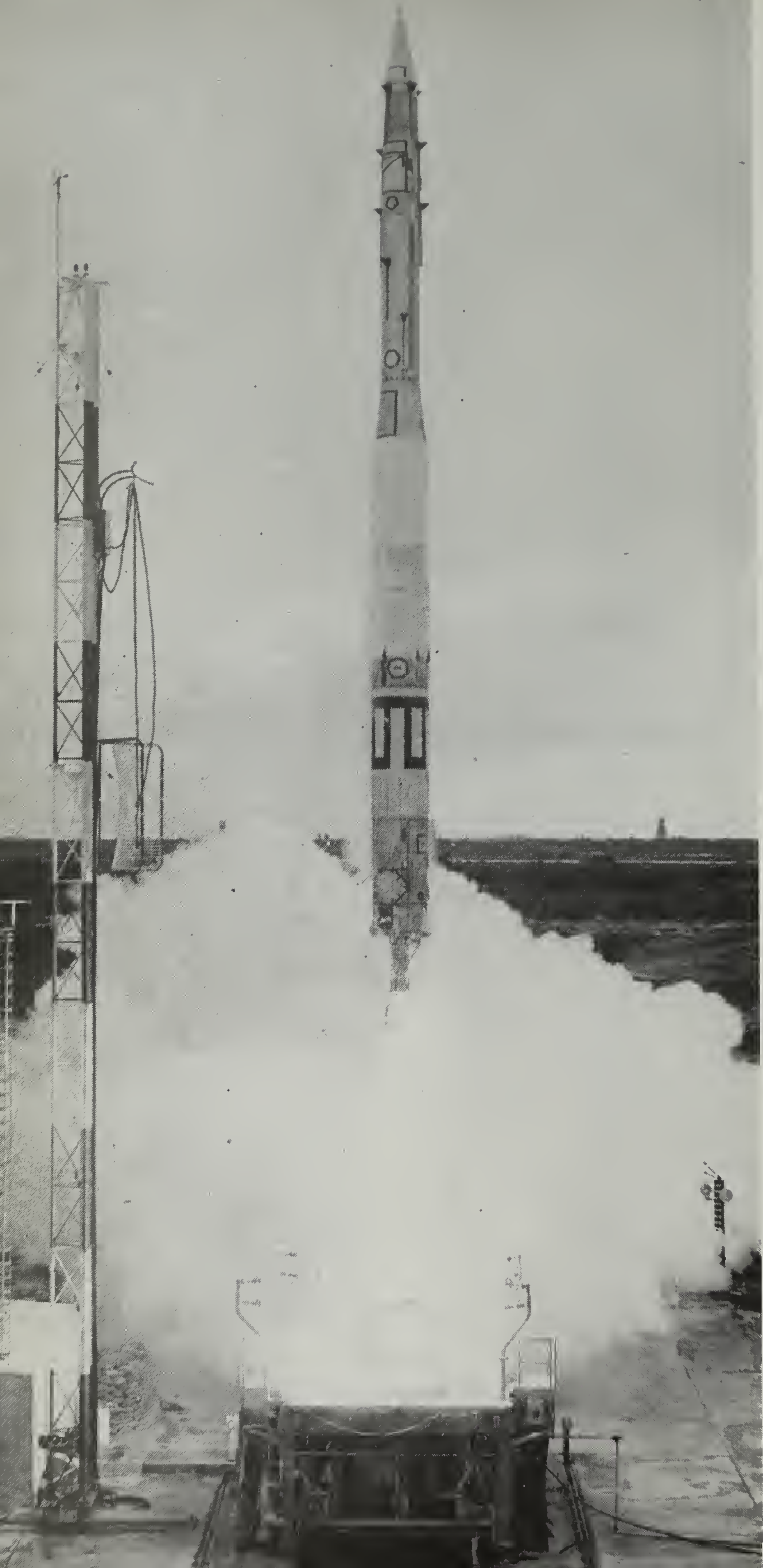
• FRONT COVER: MOON SHINE—Thomas R. Patrick, DC1, USN, takes a close look at model of earth satellite while visiting Vanguard Computing Center in Washington, D.C. Center can be seen reflected in highly polished sphere.

• AT LEFT: LOOKING DOWN—High-flying camera amidships in a Navy V-2 research rocket took this photo of the earth from 100 miles up. The picture, taken over 10 years ago, shows southwest U. S. and Mexico including Gulf of California, Southern Calif., and Pacific Ocean near the horizon.



With artificial satellites or "man-made moons" receiving world-wide attention in recent months, ALL HANDS *presents herewith an up-to-date factual report of* Project Vanguard*—the Department of Defense phase of the U.S. Earth Satellite Program and the Navy's role in it—being carried out during the International Geophysical Year (1 July 1957 to 31 December 1958).*

TO UNDERSTAND HIS PLANET, man must rise above it.

That, in simple words, is the reason for satellites and space research. Today, man knows little about the cosmic forces which affect our lives, as they are hidden from study by the heavy blanket of air surrounding the earth. Therefore, before man can learn about the mysteries of space and how they affect our lives, he must be able to penetrate the atmosphere.

REPOR

In the past, rockets, balloons and a combination of both (see page 17, ALL HANDS of Jan 1957) were the only means of going beyond the atmosphere to get a closer look at outer space. And although Navy rockets and balloons have collected a large amount of valuable data during the past 10 years, their usefulness to date has been limited.

Balloons can remain aloft for several hours but they cannot go high enough to obtain the desired information. To date, the highest balloon ascent has been 143,000 feet. That's above more than 99 per cent of the earth's atmosphere, yet not high enough. At these heights—27 or 28 miles—the air is too thin to support even gas-filled plastic balloons.

For research above the 143,000-foot mark, the Navy has had to depend upon rockets. The Naval Research Laboratory has sent *Viking* rockets as high as 158 miles, and other research rockets, such as the *Aerobee*, have consistently gone up 70 miles.

Although rockets can go high, they can't stay up. They are capable

←

VANGUARD rocket soars skyward carrying dummy second and third stages during recent Florida tests.

of collecting data above one location and for only a matter of minutes—before falling back to earth. The longest *Viking* rocket flight to date, for example, lasted only 10 minutes, from the time launched until landing.

If you took all the data collected during rocket experiments conducted in this country during the past 10 years, it would add up to less than an hour of useful observations. It is apparent, then, that a means of conducting high-altitude research continuously for long periods of time is needed.

ON PROJECT VANGUARD

THE ONE METHOD of doing this was by establishing observation "platforms" in space. Since manned flights into space are still a thing of the future, the only way to provide such a platform is to place a man-made, instrumented satellite into an orbit around the earth. A satellite—placed in orbit by rocket techniques—appears to be the only solution for lengthy research in space at this time. Satellites provide opportunities never before available for scientific measurements of the upper atmosphere. Satellites greatly increase the time available for gathering information over large areas because their life will not be limited to mere seconds, or minutes, but to hours, days, weeks and even possibly months and years.

After taking all this into consideration—and realizing that satellites would be a logical step beyond rocket and balloon studies and a giant step into space research—the United States, on 29 Jul 1955, announced that it planned to launch small, un-manned earth-circling satellites as part of its participation in the International Geophysical Year.

The Scientific Earth Satellite Program, like the other scientific projects the U.S. is performing during the IGY, is under the sponsorship of the National Academy of Sciences and the National Science Foundation (See pages 34-39 for a rundown on the Navy's role in support of the IGY).

The U.S. Scientific Earth Satellite Program, as outlined by President Eisenhower, calls for the launching of an instrumented sphere in an orbital path above the atmosphere of the earth strictly as a scientific venture. But, because of the vastness of this project, and because the Department of Defense had the talents and facilities for carrying out the launching of the satellite, it was asked to lend a hand. This is how the Navy got into the satellite program.

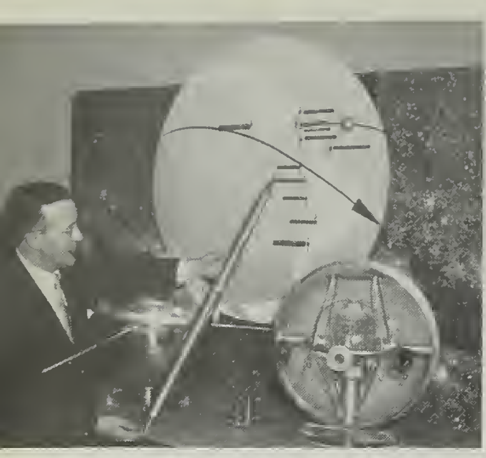
When the satellite program was announced, no one knew exactly how the task was to be done. No similar project had ever been undertaken before. The Navy, however, had a good idea as to what this project would involve as it had been probing space and conducting high-altitude research with rockets and balloons since the end of World War II.

THE DEPARTMENT OF DEFENSE's role in the U.S. satellite program, called Project Vanguard, was set up as a joint Army-Navy-Air Force program. However, on the basis of the Naval Research Laboratory's rocket development and 10-year experience in high-altitude research, the Navy, specifically the Chief of Naval Research, was selected to manage Project Vanguard.

In this joint three-service effort, the *Navy* is providing the launching vehicle and the satellite spheres; the *Army* is setting up and manning the radio tracking and telemetering stations; while the *Air Force* is providing the launching facilities and will also operate some of the tracking and telemetering stations.

While RADM Rawson Bennett, USN, Chief of Naval Research, has the over-all responsibility for the Navy's and the Department of Defense's role in the U.S. Satellite program, a top civilian scientist, Dr. John P. Hagen of the Naval Research Laboratory, is the Director of Project Vanguard.

It has been under Dr. Hagen's guidance that the Naval Research Laboratory has gone about the technical job of getting the man-made satellite into its orbit. All in all, this was a big job and it presented a tremendous challenge to the Navy. Great progress has been made in the 30 months since the plans for Project Vanguard were announced.



SATELLITE, launcher, orbit, and tracking stations, are demonstrated by Dr. Hagen, Director of Vanguard.

An operation as complex as launching a delicate scientific satellite into space cannot be undertaken without an extensive series of careful, detailed tests in which every part is thoroughly tested. The structure, motors, guidance and control mechanism and their electronic components must be thoroughly checked out.

These tests are continuing and from all indications the Navy will, as committed, place a satellite in orbit during the IGY now underway.

When tests of the third stage of the satellite's launching vehicle proved successful, the Navy decided to place six-inch spheres equipped with radio transmitters into its four test vehicles. If any one of these test vehicles goes through all of its tests satisfactorily, the six-inch sphere could go into orbit. There are four six-inch spheres scheduled for test flights within the next three months.

If these tests are satisfactory and development proceeds according to schedule, the Navy will make its first attempt to place a fully instrumented 20-inch satellite into orbit in March 1958. This schedule, however, is subject to change depending upon the results of the test program. The Navy will attempt to launch at least six fully instrumented (20-inch) satellites into orbit before the end of the IGY.

Although weighing only 21½ pounds, it will take more than 11 tons of rocket and fuel to get this sphere—not much bigger than a basketball—into its orbit. The launching vehicle will be a three-stage Vanguard rocket, 72 feet long. (See page 32.)

To get a satellite into its orbit it must travel between 18,000 and 25,000 miles per hour when separated from its launching vehicle. If it goes faster, it would shoot off into space; slower, it would fall and burn up like a meteor.

The satellite's orbit will not be a perfect circle around the earth. Its speed will be slightly more than enough for a circular orbit. It will be an ellipse—roughly egg-shaped.

How long the satellites will remain aloft depends upon how high they will be fired. According to Naval Research Laboratory calculations, a satellite in a circular orbit 300 miles above the earth would stay up about a year or more. A circle 200 miles up would give a lifetime of about 15 days, and 100 miles up its lifetime would be only about one hour.

Another factor determining the life of the satellite would be the density of the atmosphere. This is a puzzler, as scientists don't know as yet how dense the atmosphere is at levels above 150 miles. It's something they hope to learn from satellites.

Getting the satellite into its orbit is just one phase of the Navy's overall job in Project Vanguard. Once it begins circling the earth, the Navy must prove the man-made moon really is orbiting and measure its orbit. In other words, the satellite must be tracked. This will be done by two methods. The first will be by a radio tracking system known as Minitrack, developed by the Naval Research Laboratory.

A sub-miniature radio transmitter inside the satellite will send out signals that will be picked up by a series of tracking stations. (See page 5.) Each of these stations will be able to analyze data on the direction and the velocity of the satellite from signals received by its antennas, and will send this data to the main Vanguard Computing Center in Washington, D. C. Here electronic computers will calculate the times of future passages of the satellite over various points, and this data will be sent out to observing stations that hope to pick up the satellite and track it with optical instruments.

The second method of tracking

President Eisenhower on the Satellite Project

"The United States satellite program has been designed from its inception for maximum results in scientific research. The scheduling of this program has been described to, and closely coordinated with, the International Geophysical Year scientists of all countries.

"As a result of passing full information on our project to the scientists of the world, immediate tracking of the United States satellite will be possible, and the world's scientists will know at once its orbit and the appropriate times for observation.

"The rocketry employed by our Naval Research Laboratory for launching our Vanguard has been deliberately separated from our ballistic missile efforts in order, first, to accent the scientific purposes of the satellite and, second, to avoid interference with top priority missile programs. Merging of this scientific effort with military programs could have produced an orbiting United States satellite before now, but to the detriment of scientific goals and military progress.

"Vanguard, for the reasons indicated, has not had equal priority with that accorded our ballistic missile work. Speed of progress in the satellite project cannot be taken as an index of our progress in ballistic missile work.

"Our satellite program has never been conducted as a race with other nations. Rather, it has been carefully scheduled as part of the scientific work of the International Geophysical Year.

"I consider our country's satellite program well designed and properly scheduled to achieve the scientific purposes for which it was initiated. We are, therefore, carrying the program forward in keeping with our arrangements with the international scientific community.". . . President Dwight D. Eisenhower.

the earth satellite is through visual means. This optical tracking program, which will be particularly useful after the transmitter runs down, is being conducted by the Smithsonian Astrophysical Observatory and is not a part of Project Vanguard.

THE ULTIMATE PURPOSE of Project Vanguard is to create a satellite for scientific research. Many experiments could be devised for an earth satellite. In the case of Vanguard, however, the small size and payload must be kept in mind. Roughly half of its 21.5 pounds are absorbed in the satellite's structure. This leaves about 10 pounds for sicentific instruments. Some of this weight must go into the Minitrack transmitter and a power supply, which will consist of batteries.

Tracking the satellites will enable scientists to make better measurements of the size and shape of the earth, and distances between points of the earth. This will be one of the satellite's scientific experiments.

A second output of the tracking program will be measurement of the drag on the satellite. From this, the density of the atmosphere at that height can be figured.

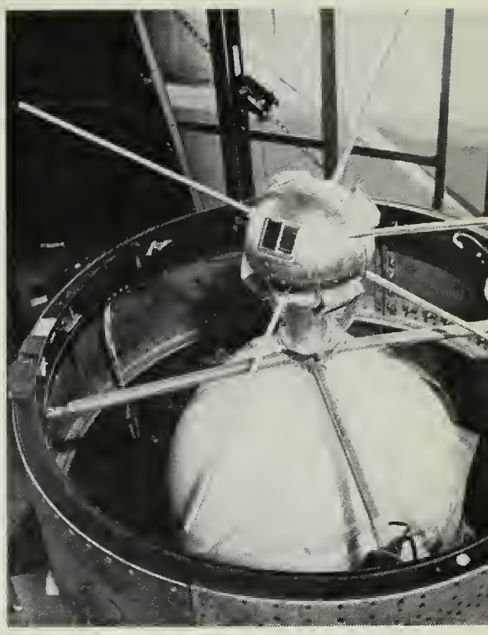
Scientists also want to measure temperatures on the outside and inside of the satellite. Miniature temperature gauges have been designed that can evaluate temperature changes from 302 degrees above zero, Fahrenheit, to 220 degrees below zero, Fahrenheit.

Another piece of equipment designed for satellite instruments is a sub-miniature meteoritic collision microphone. This sensitive little microphone detects the collisions of meteorites with the satellite by sensing vibrations set up in the satellite's outer surface. This information will be stored in a memory device and transmitted at intervals to the radio tracking stations on the ground.

Ultraviolet and X-rays from the sun will also be measured. This information will be compared with weather and radio communication conditions on earth at the same time, to see if there is any apparent correlation.

Certain instruments will measure the Earth's magnetic field above the atmosphere. By comparing this data with measurements on the ground, scientists will be able to find out more about the effect of current rings far out beyond the atmosphere. Such a ring is formed by the Earth's permanent magnetic field from charged particles that come from the sun. This knowledge will be important in the field of radio communications.

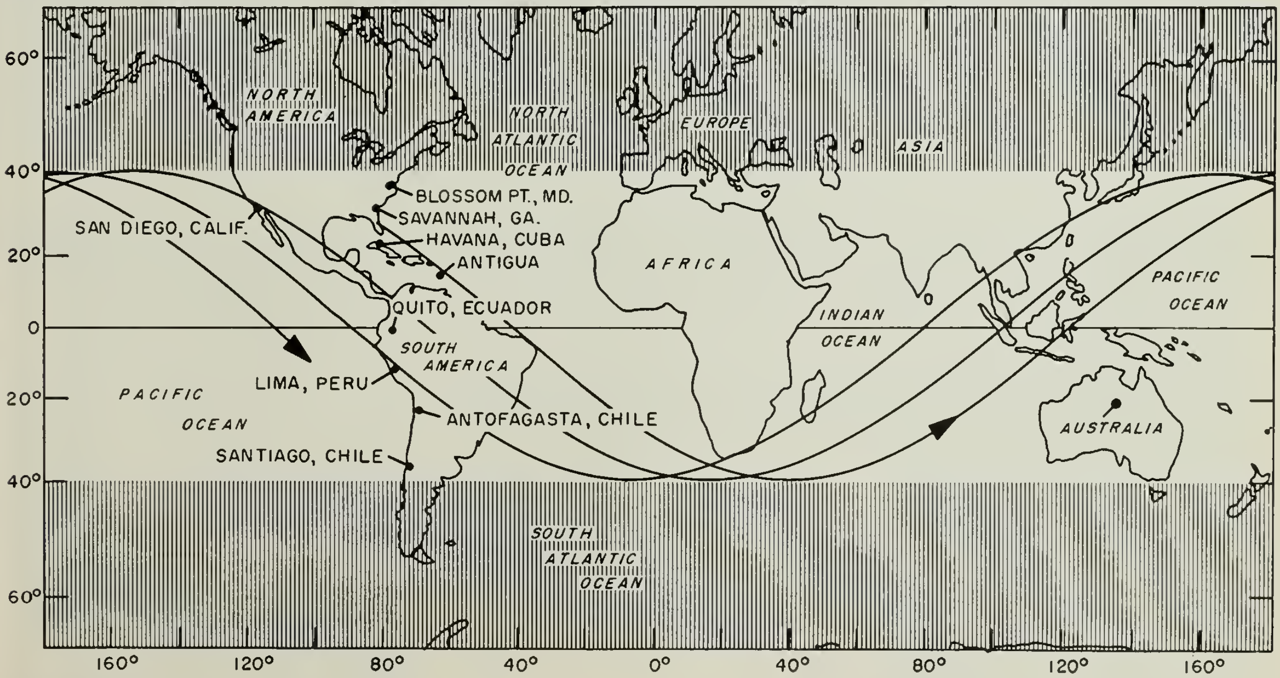
THESE ARE JUST A FEW of the experiments which the satellite will be called upon to perform. Even with the small payload permitted in a 20-inch satellite, measurements can be carried out for several weeks with conventional batteries.



TEST SATELLITE sits in its position in nose cone. Window-like objects are solar batteries providing sun power.

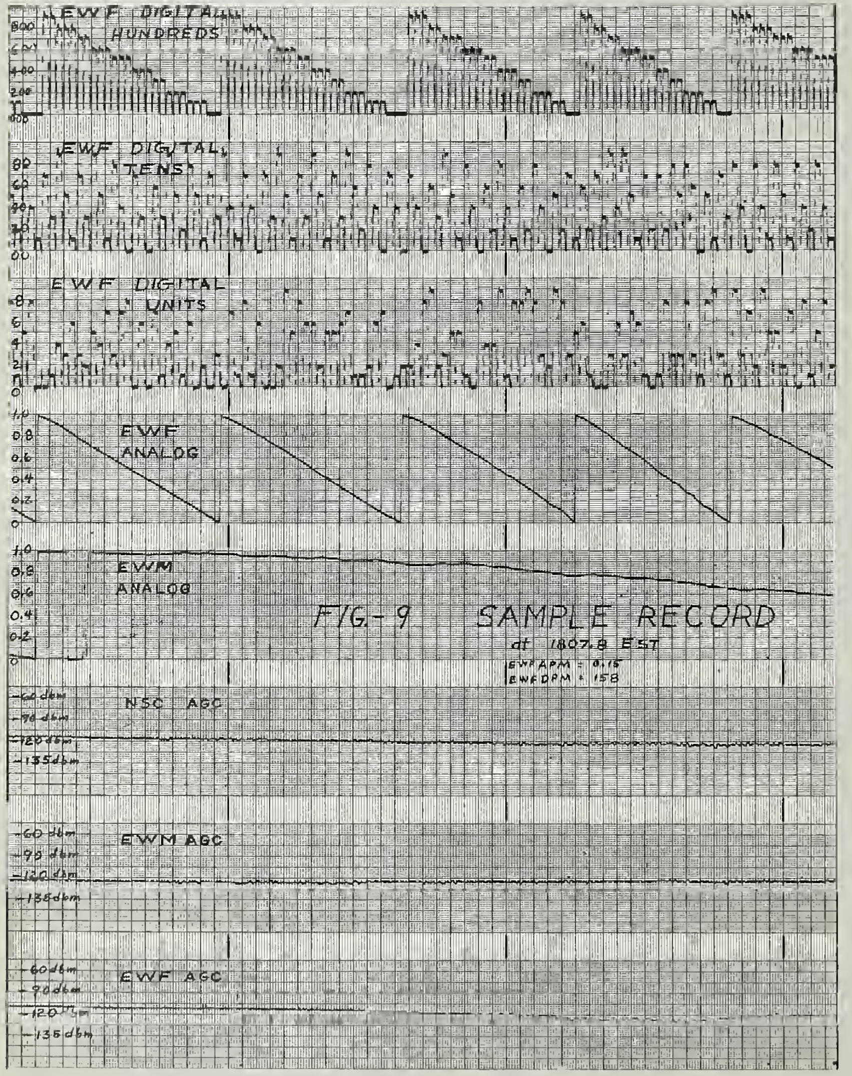
The technical complexities involved in the design and construction of the Vanguard rocket, the satellites themselves and its launching devices were enormous. To place the satellite into its orbit where it will record and transmit information to radio receiving stations, the Navy

KEEPING TRACK—Chart shows Minitrack locations in Americas and Australia and their relation to satellite orbits.



found it necessary to draw upon the skills and resources of over 100 different industrial and scientific organizations throughout the country. Here's a partial list of some of the scientific and industrial achievements which have been coordinated by the Naval Research Laboratory for Project Vanguard:

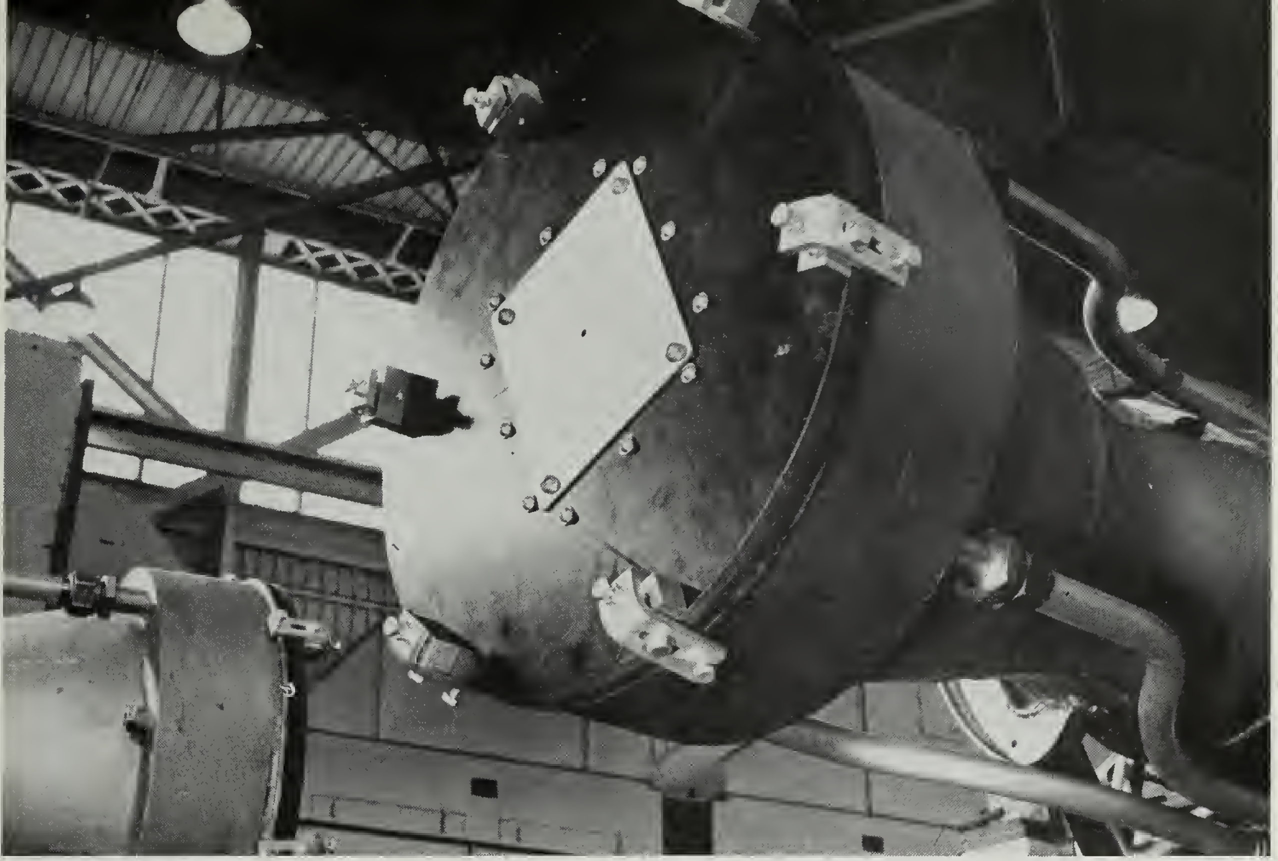
- The vanguard rocket—A three-stage launching vehicle capable of carrying a 21½-pound satellite into its orbit 300 miles above the earth. The *Vanguard* rocket is 72 feet over-all, weighs 11 tons, and is equipped to launch the satellite at a final speed of 18,000 miles per hour.
- The first-stage engine—Produces more than 27,000 pounds of thrust to lift the 22,000-pound launching vehicle to a height of 36 miles. At burn-out time this power plant will have accelerated the rocket to a speed of 4,000 miles per hour in approximately 140 seconds.
- The second-stage engine—Takes over after first stage burn-out. It will push the second and third stages to an altitude of about 300 miles.
- The third-stage rocket — Ignites after second stage burn-out to accelerate the third stage to a speed of 18,000 miles per hour (or five miles per second).
- retro and spin rockets—Used to separate the expended second stage from the third stage. Spin rockets spin the third stage like a football to give it greater directional stability.
- The separation mechanism—This device ejects the earth satellite from the third stage rocket after both are established in the orbit. It consists of a large coiled spring, triggered by a timer.



SPACE WRITING—Signals received from Minitrack transmitters will be recorded on paper and look similar to this. Info will be 'translated' by scientists.

- The program timer—This contains a specially coded steel tape which holds complete flight instructions for the launching vehicle.
- Coasting time computer—Is a compact electronic calculator which senses the correct moment to fire the third and final rocket stage.
- Gyro-reference system — Is used to detect errors in the flight of the rocket. It sends corrective signals to an autopilot amplifier to guide the second and third stages into the proper orbit.
- Magnetic amplifier autopilot—Obtains pitch, yaw and roll axis displacement signals from the Gyro-Reference System. The electrical output power directs hydraulic actuators which in turn displace the rocket motor and its thrust line for pitch and yaw control.
- Artificial earth satellite—This is the 21-inch sphere which will contain the scientific instruments to measure phenomena above the earth's atmosphere. Its shell consists of two hemispheres and certain structural parts. The "skin" is a magnesium alloy, .028 inches thick in most areas and thinly plated with gold, chromium, silicon monoxide, aluminum, and an additional coating of silicon monoxide.
- Minitrack radio tracking equipment—Is designed to pick up signals from the satellite's tiny subminiature transmitter. The Minitrack equipment was designed and developed by the U. S. Naval Research Laboratory. Signals from the satellite are picked up by the Minitrack stations on the ground (see page 16). This information will be relayed to the Vanguard Control Center at the Laboratory to be screened before being transmitted to the Computing Center where the data is used to determine and predict the satellite's orbits. The Minitrack radio tracking equipment picks up radio signals from the satellite through a unique antenna design and ground arrangement. The antennas are placed in a formation resembling a cross and cover an area of 500 to 1000 feet.

The development of these items which are just a small portion of the over-all needs of Project Vanguard, represents countless thousands of man-hours in scientific and engineering research, as well as the total of man's limited knowledge of space. —**H. George Baker, JOC, USN**



BIG BLASTERS—First-stage engines are tested at plant. Open end of thrust chambers are covered to keep out dust.

How Can Rockets Operate in Space?

WHY WERE ROCKET ENGINES selected to drive into space the Vanguard rocket bearing our earth satellite? Simply because they are the only power system now available that can operate in space.

Every type of combustion engine now in use requires oxygen. Under normal conditions, piston and jet type aircraft are able to remove from the atmosphere the amount necessary to support the combustion of fuel. However, as the plane goes higher and higher above the earth's surface the oxygen becomes less and less. If a plane were to reach, for example, a 15-mile altitude, the amount of oxygen in the air could not support combustion in even the most advanced type of supercharged piston engine. The jet would be gasping for breath.

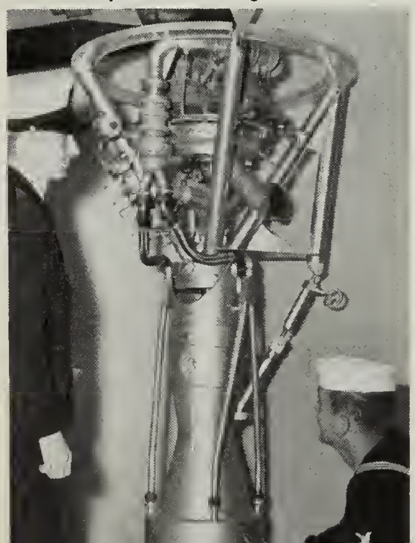
The rocket, which does not depend upon atmospheric oxygen for combustion, can continue on into space without hesitation, rising on its own exhaust and carrying both fuel and an oxidizer to burn the fuel in its tanks. In Vanguard, liquid oxygen supports the burning of rocket fuel in the first stage rocket motor and nitric acid in the second stage. The third stage rocket, which fires at an altitude of 300 miles where air is almost nonexistent, has a solid propellant motor.

Solid fuel rockets, in recorded use since 1232 A.D., have reached a state of maturity after proving their military worth during World War II (Army *Bazooka*, Navy *Tiny Tim*, German *Minenwerfer;* and Russian *Katusha* are all examples of solid propellant rockets used in the war).

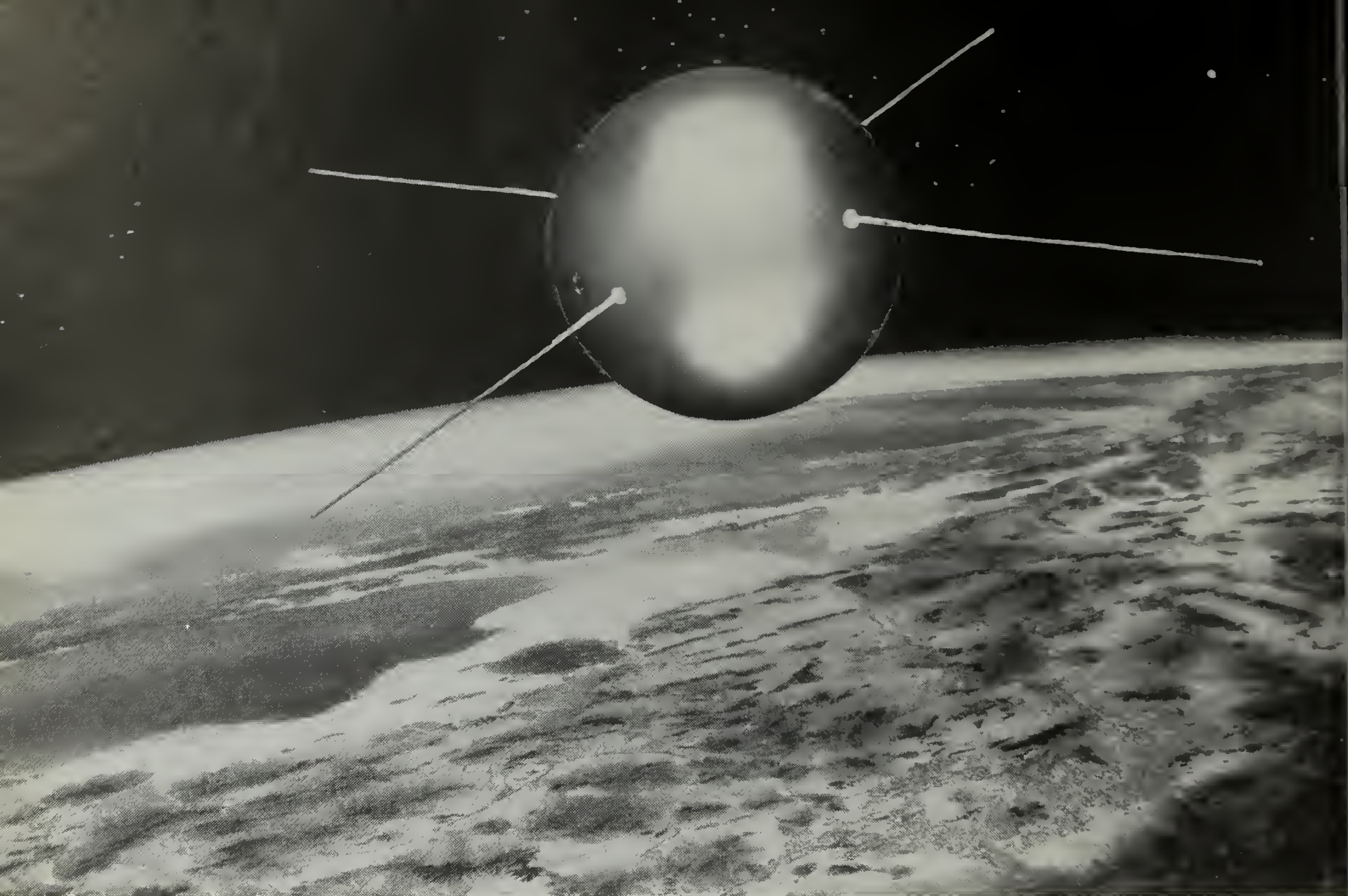
The liquid fuel rocket such as the Vanguard first- and second-stage engines, is the infant power unit in the rocket family. The most famous liquid rocket was the German *Vergeltungswaffe-zwei* — the V-2 of World War II. However, the first flight of a liquid-fueled rocket was in 1926.

The Vanguard rocket's 27,000-pound thrust will some day seem small, when rocket motors developing more than 100,000 pounds of thrust move from their present experimental stage into one of advanced development.

Replica of 1st-Stage Motor

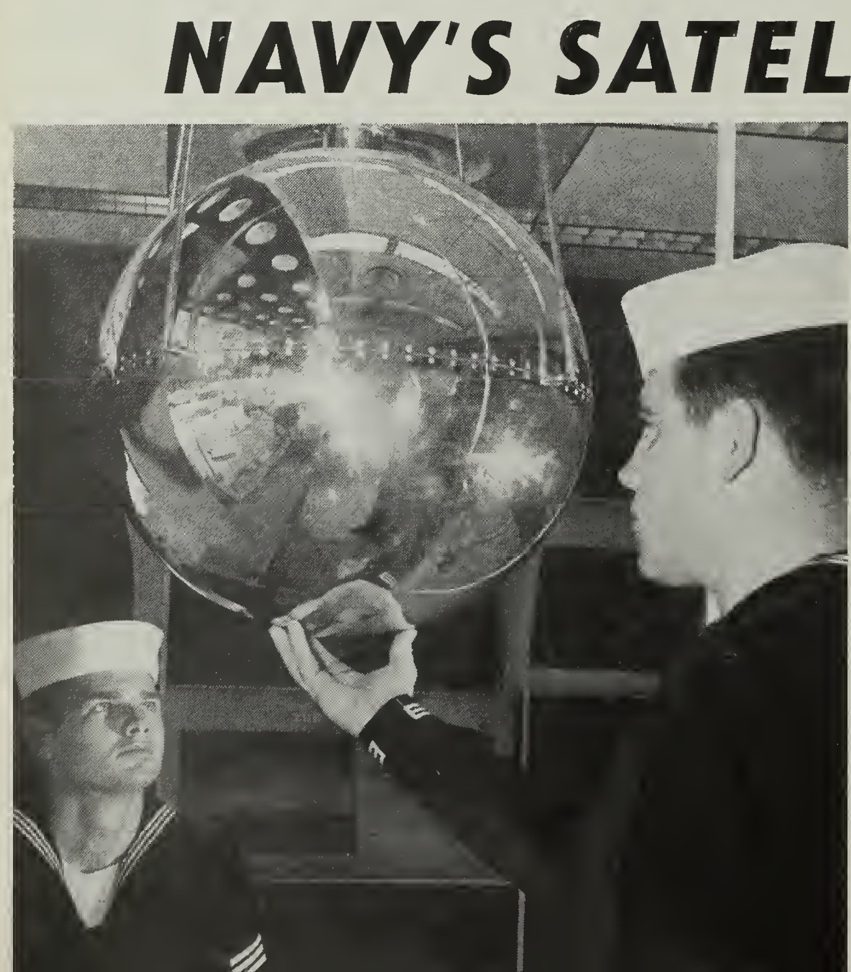


Replica of 2nd-Stage Motor



UP AND UP—Composite picture shows satellite and photo taken from rocket 143 miles up. *Below:* Satellite is studied.

NAVY'S SATELLITES AR



ACCORDING TO THE dictionary, a satellite is an attendant attached to a prince or other powerful person; hence, a follower. However, satellites also have a secondary or astronomical meaning.

Natural Satellites

So far as astronomy goes, a satellite is a celestial body or secondary planet which revolves around a larger body or planet. The planets Earth, Mars, Jupiter, Saturn, Uranus and Neptune each have one or more satellites.

The earth's only astronomical satellite is the moon. The earth is the larger body (it's four times as big as the moon) and is about 239,000 miles away from the moon. The earth rotates on its axis close to 1000 miles per hour and the moon circles around the earth about once every 28 days. It travels at a speed of approximately 2300 miles per hour.

Man's Satellites

A man-made satellite then, is an object made by man and thrown into space so it will circle the earth somewhat in the same manner as the natural moon does.

The U.S. Navy will attempt to launch 10 man-made satellites during the current IGY. Four of them will be tiny "moons" measuring 6.4 inches in diameter and weighing about four pounds. The remainder will be somewhat larger—about the size of a medicine ball—20 inches in diameter and weighing 21½ pounds.

These man-made satellites will travel at a speed of 18,000 miles or more per hour. At that speed, it will take only about 90 minutes to circle the earth.

How Will These Man-Made Satellites Be Launched into Space?

Before a man-made satellite could be launched into space, many obstacles caused by the earth's atmosphere and gravity had to be overcome. First, man had to figure a way of getting the satellite through the atmosphere without burning it up, and then getting it high enough so it would overcome the earth's gravitational force.

Since the air that blankets the earth thins out as you go higher and oxygen becomes scarce, winged flights into space are impossible.

READY

Rockets—which carry their own oxygen, need no wings, and are capable of traveling at almost unbelievable speeds—proved to be the only solution to these problems.

Since no rocket had previously been built as a satellite-launching vehicle, the Navy had to begin from scratch to build one. It designed and developed a 72-foot, finless, three-stage rocket that's shaped like a rifle bullet. At take-off, this Vanguard rocket produces 27,000 pounds of thrust—less than 5000 pounds more than its gross take-off weight which, including fuel, totals 22,600 pounds.

As fuel is consumed, the rocket's over-all weight is lessened and its thrust increases. In less than 140 seconds after launching—when the first-stage fuel has been exhausted and its casing dropped—the rocket will already have climbed to an altitude of 36 miles and will be moving upward at a speed of about 4000 miles per hour.

During this stage of the flight, the rocket's speed has been slow enough to prevent it from heating up and damaging the satellite. And at an altitude of 36 miles, the atmosphere is largely below; thus, the heat or atmospheric problems are taken care of as the air pressure is reduced and the resistance lowered.

The rocket's second stage eliminates the gravity problems as it carries the satellite to a height of 300 miles. At this point, the third stage is fired after the second stage gives it a spin around its axis in order to equalize the thrust of the solid rocket propellant of the third stage. The second stage drops off and the third stage increases its speed up to 18,000 mph or more, which is sufficient to overcome the earth's gravitational pull.

To complete the process of putting the man-made moon into space, the satellite is separated from the third-stage rocket engine by a spring mechanism which is actuated by a mechanical timer as soon as the third stage burns out.

When Launched, What Will Keep The Satellite from Falling or Going off into Space? How Fast Will It Travel?

When separated from the third stage of its launching vehicle, the satellite will be flying horizontally in a chosen orbit around the earth between 18,000 and 25,000 miles per hour. If it went faster, it would shoot off into space; slower, it would fall. At this speed, the satellite maintains a perfect balance between the force of gravity pulling it toward earth and the centrifugal force resisting this pull.

To illustrate this, take the circus or carnival stunt rider who rides his motorcycle around the side of a motor-drome. In order to stay up on the side of the perfectly balanced circular tank the motorcycle must travel at an exact constant speed. If he goes too fast, he'll shoot out over the top of the tank, and if he slows down, his motorcycle will fall to the bottom.

Like the motorcycle, the satellite must maintain a perfect and constant speed as it circles the earth in order to stay up. According to Newton's second law of motion—which states that once a body is set in motion, it will remain in that state unless some

INSIDE JOB—Plastic model shows how instruments will go into space sphere.

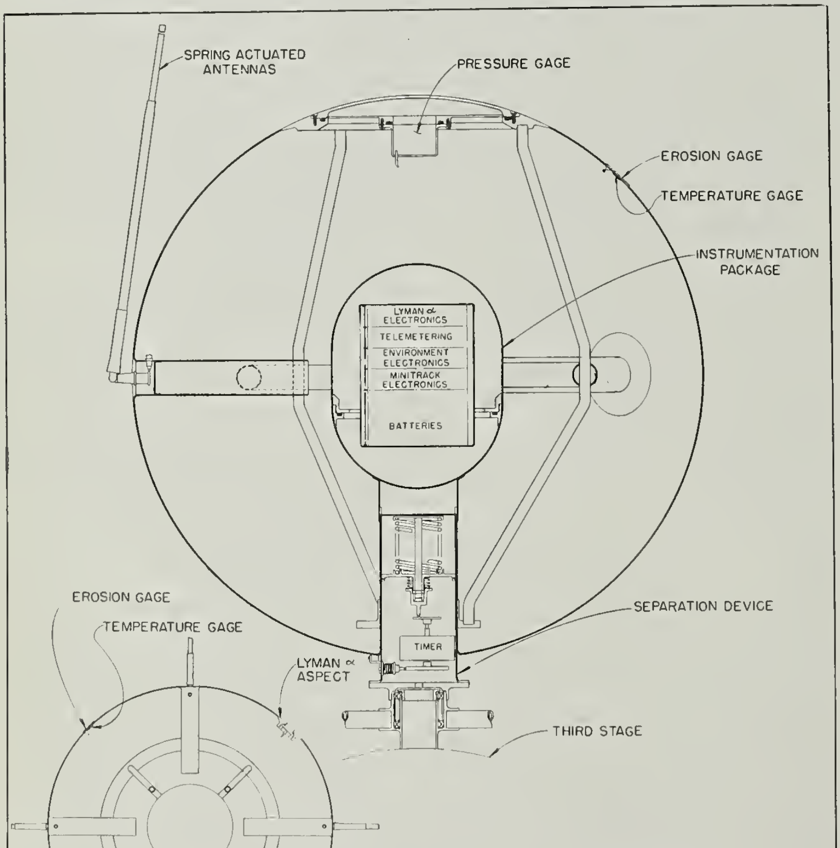
UPPER PLATE—Satellite is checked before special plating that will protect it.

force changes it—the satellite's speed of 18,000 mph or more should remain constant for quite some time. Where there are no outside forces working against the satellite's forward motion, it can continue to travel at that speed indefinitely.

The satellite's chosen orbit is a nominal circle 300 miles above the earth's surface. Owing to errors in height, angle and velocity during launching, the satellite's orbit will be elliptical rather than in a perfect circle. In an elliptical orbit, the satellite might swing as low as 200 miles above the earth, but then will ride out as far as 1500 miles.

Will These Man-Made Moons Stay Aloft Forever?

No, not forever. But exactly how long, no one can predict. How long a satellite will stay aloft depends upon the altitude of its orbit. If launched beyond 300 miles, they should whiz around the earth for a year or more; 200 miles, about 15 days, and if only 100 miles, their life span will be limited to an hour or two at the most.



Another factor in determining the life of a satellite is the density of the atmosphere. As yet, scientists don't know just how dense the atmosphere is beyond 150 miles. That's something they hope to learn from the satellites.

As said earlier, the man-made moons will not stay up forever. The age-old adage—what goes up, must come down—applies to satellites, too. As time goes on, the drag of the air, thin as it may be at 300 miles, meteor dust and other factors will eventually cause the satellites to slow down. When they lose speed they will also lose their centrifugal force and the earth's gravitational pull will make them fall back into the atmosphere.

Will Falling Satellites Present any Danger?

The satellites the U. S. plans to launch during the IGY will present no danger when they fall from space. By the time they return to the earth's surface they will be no more than microscopic specks of dust. As the satellite loses speed and falls into the earth's atmosphere, air friction will cause it to burn up. It will burn and create a glow in the same manner as tiny meteorites or shooting stars, which are so often visible at night.

How Is a Satellite Tracked Once It's Launched into Orbit?

As the tiny satellite circles the earth, it is tracked by a system of radio angle tracking called "Minitrack." The Minitrack system and its equipment was developed by the Naval Research Laboratory.

This radio tracking system is built around a very small transmitter within the satellite. It sends a beam of radio energy to receiving antennas at 10 different ground stations. A chain of these Minitrack stations has been established up and down North and South America from Blossom Point, Maryland to Santiago, Chile; with stations located also at Antigua, B.W.I., and Woomera, Australia.

Minitrack, during the initial orbit,

will localize time of arrival of the satellite over any given ground location within six minutes, and will give its position within several hundred miles. This information will be accurate enough to alert visual tracking stations, as to the time and position of the satellite over their location.

In addition to tracking the satellite in orbit, the Minitrack system also enables scientists to follow the satellite's launching, direction of launch and movements of the second and third-stage rockets. (For more on the tracking system see page 16.)

Can These Tiny Man-Made Moons Be Seen as They Circle the Earth?

Under clear atmospheric conditions you should be able to see them fairly well with a good pair of binoculars or a modest astronomical telescope. If you look closely enough, you may be able to see the satellites with your naked eye. That is, if you are in the right place, at the right time and know which direction to look. This information will be available as a result of information received through the Minitrack system.

The satellite is as bright as a star of the fifth or sixth magnitude. The best time to observe it will be about an hour before sunrise and an hour after sunset. (No chance of getting sunburnt but watch out for those stiff necks.)

Thirteen prime astronomical observatory stations have been established in different parts of the world to photograph the satellite's position in orbit in relationship to known positions of the stars. In addition, there are about 200 secondary stations and many amateur stations making their own physical observations.

How Are Satellites Made?

Without getting too technical, here are a few simple instructions:

To make a satellite, you cut out a circular disc of magnesium, put it on a lathe and "spin" and disc it into a hemisphere. This process is repeated for a second hemisphere. Then the two are fastened together (with screws). It is in this sphere (which weighs about 10 pounds) that the compact radio, electronic- and data-gathering instruments are installed.

After the two hemispheres are fastened together, the 20-inch globe must be put through a coating process to prevent corrosion and aid in making temperature measurements. In all, five coatings must be applied.

First, the satellite is electroplated with gold to make the other surfaces adhere better and to stop corrosion. Gold, because of its low corrosive and low heat qualities, is also used to cover the inside of the satellite's structure.

After the gold plating, a thin layer of chromium is applied. Next a layer of silicon monoxide is put on to act as a barrier between the chromium and the fourth layer, aluminum. This prevents the dark chromium from diffusing into the bright aluminum.

The satellite's fourth layer, aluminum, makes it look like an oversize mirror-like Christmas tree ornament. This layer reflects the sun's heat and makes the satellite visible on earth. These first four coatings are no more than four or five millionths of an inch thick.

The fifth and final coating is another protective coating of silicon monoxide.

The man-made moons are also equipped with four radio antennas, somewhat like the ones on an auto. They snap into position when the satellite is released from its launching vehicle.

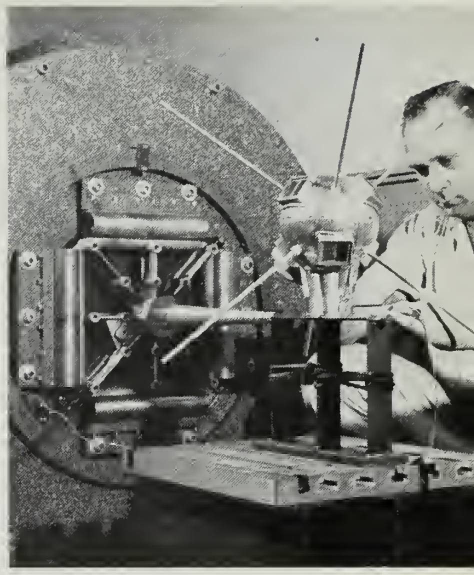
What Useful Purpose Will Satellites Serve?

As scientific research vehicles, the usefulness of satellites is limited only by man's imagination. Small as these man-made moons may be, scientists will gain much interesting information in the fields of astronomy, of geophysics, and information of geodetic value from them.

Satellite experiments include a study of ultraviolet radiation from the sun; studies of the magnetic field of the earth; studies of the intensities of primary cosmic rays coming into the earth from outer space and other studies of the atmosphere.

In addition to information about the upper atmosphere and the radiation it receives from outer space, satellites offer earthbound scientists a new and valuable way of looking at the world itself.

Information from satellites will give precise measurements between continents and islands as well as other topographic features. All this information will broaden man's knowledge of the universe in which he lives and will undoubtedly have many practical applications neither foreseen nor predicted today. However, it is known that basic satellite research will lead to benefits in the area of communications, which will be improved by a better knowledge of the earth's atmosphere. By the same token, this information will lead to better weather forecasting and to further conquests in medicine, physics, chemistry, astronomy and other sciences.



SHAKE, RATTLE and roll capabilities of sphere's instruments are tested on machine at Naval Research Lab.

If the Satellites Burn Up and Never Return to Earth, How Do Scientists Get All This Information from Them?

Information collected by the instruments within the satellites is stored up in a memory unit and telemetered to earth by radio. These coded signals are picked up by the Minitrack stations and later translated by Navy scientists.

What's the Connection between the Satellite and IGY?

Today, man and science are on the threshold of a new era in upper atmospheric research. We are now in the sixth month of the 18-month International Geophysical Year during which the world's community of scientists are conducting a series of spectacular global experiments in an effort to unlock the deeper mysteries surrounding the planet on which we live. Satellite ventures into space are among the experiments being conducted as part of the IGY. This scientific "year" began 30 Jun 1957 and will continue through 31 Dec 1958.—H. George Baker, JOC, USN

Three-Stage Rocket Will Launch

THREE . . . TWO . . . ONE . . . FIRE! A finger hovers over a firing switch and then presses it, bringing life to a giant white rocket some distance away. Ever increasing amounts of fuel flow into its motor and with a burst of flame the Vanguard rocket begins to rise, higher and higher.

Its destination—SPACE.

Resting inside the Vanguard rocket's protective nose cone is a small round ball . . . . the U. S. earth satellite. The rocket's mission is to deliver that metal globe, packed with instruments, into an orbit some 300 miles above the earth and impart to it a speed of 18,000 mph.

To accomplish this, American scientists working with the Navy created the Vanguard rocket which stands 72 feet high and is 45 inches in diameter. Packed into the cylindrical shell are two liquid rocket motors and one solid propellant rocket, the power sources which will carry the 21-pound satellite into space.

Scientists term the Vanguard propulsion device as a three-stage rocket. In other words it will use three different power units to provide the propelling force during various phases of the space voyage. The first unit is the largest, for it must break the grasp of earth's gravity and must force the slim, bullet-shaped rocket through the thick lower atmosphere. The second stage will carry the satellite-bearing third rocket to the orbital altitude of 300 miles. This stage will carry the guidance system which directs the rocket as it moves through the curving trajectory.

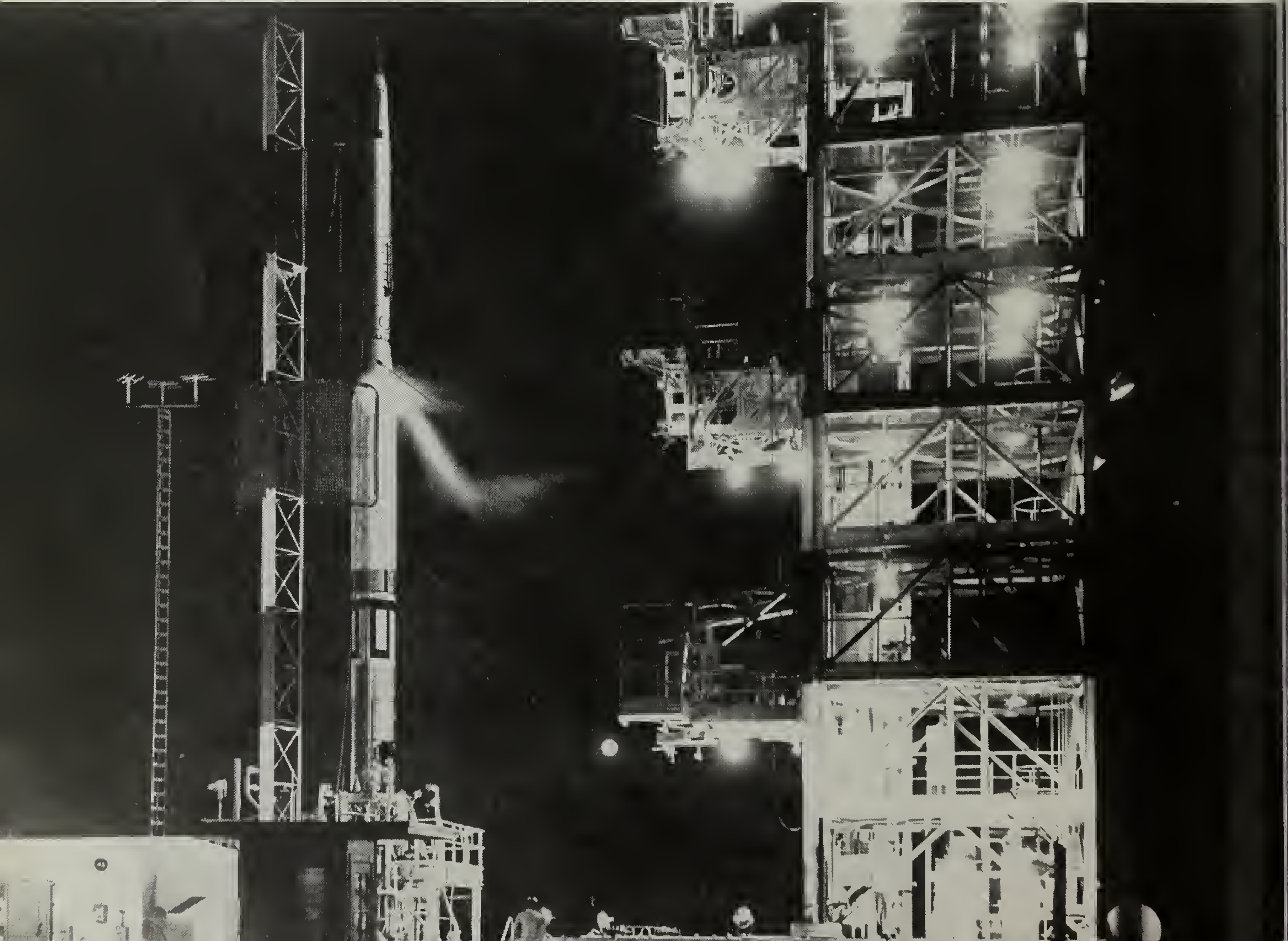
THE THIRD STAGE WILL accelerate the satellite up to 18,000 mph before burning out. At that point, a spring actuated mechanism will throw the globe into its orbit around the earth.

The Vanguard rocket is at present in the third of seven stages of testing. Test vehicle *ZERO* (TV-0) was fired last year. This was a single-stage test using a *Viking* rocket which closely resembles the Vanguard rocket's first-stage. In May 1957, a successful two-stage test was held, using a *Viking* first-stage and a prototype of the third stage.

TV-2 used Vanguard's first-stage, but the second and third stages in the recent firing were dummies containing only test instruments. The test was undertaken after the Project Vanguard rocket's first stage had completed extensive ground tests. TV-2 allowed scientists to observe the first-stage engine under actual flight conditions, evaluate the instrumentation of the rocket, and make aerodynamic and structural studies of the complete external configuration of the Vanguard vehicle.

After TV-2, four test firings of the complete three-stage rocket are planned as preliminary stages of the satellite mission. In each of the tests, Vanguard will carry a test payload

NIGHT LIGHTS—Vanguard test rocket gleams under the lights while undergoing tests in preparation for launching.



Satellites

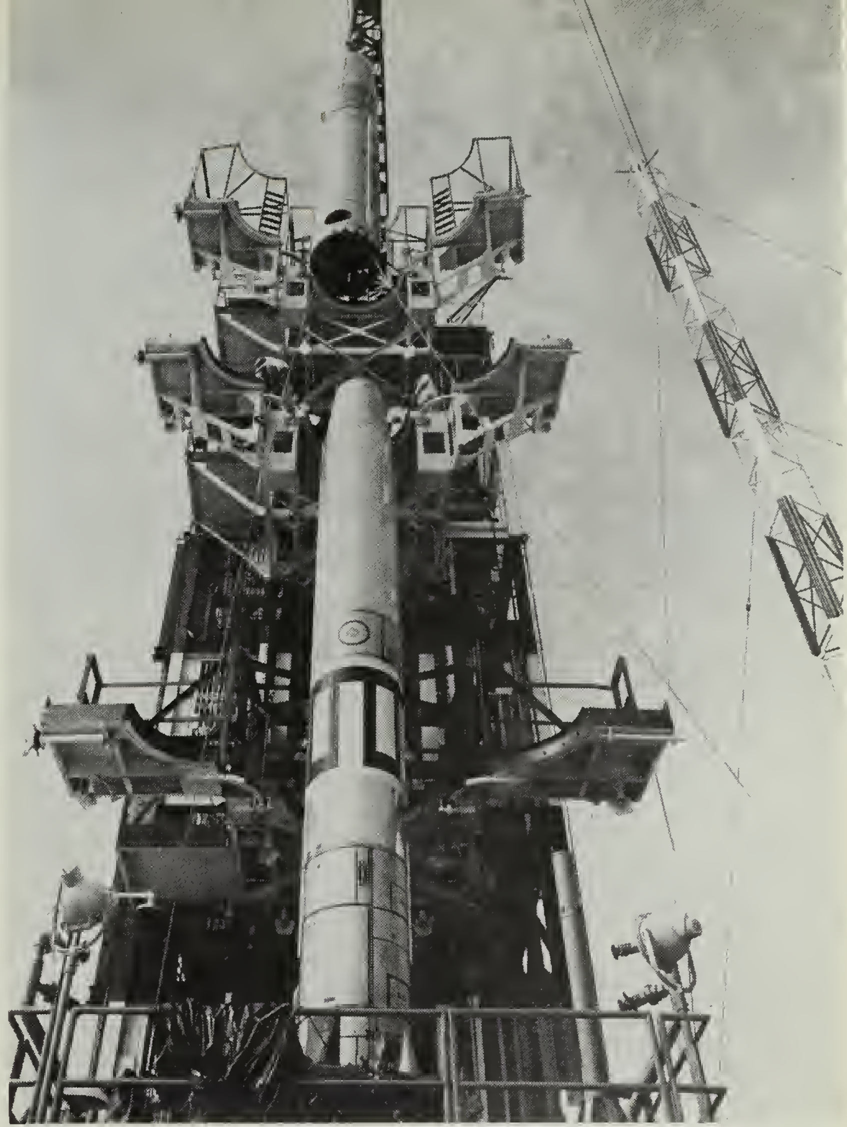
of an aluminum sphere, weighing about four pounds, which will be 6.4 inches in diameter. Each sphere will carry a Minitrack transmitter to permit tracking stations along the test range to measure the velocity of the sphere before and after the spring ejection.

During the flight tests, which are being conducted at the Air Force Missile Test Center at Cape Canaveral, Fla., where TV-2 was fired, the Vanguard rocket will automatically radio back performance information to be processed and analyzed by scientists and engineers. Some of this data will be available to the technicians within hours after the rocket is fired, thanks to a new electronic brain known as the Automatic Recording and Reduction Facility (ARRF).

Housed in an instrumented mobile trailer near the firing stand, the digital data recording system will receive information and record it on magnetic tapes. The ARRF digests this material and prints it in the form of graphs and tables that can be used in evaluating the flight. Before the ARRF was developed it took weeks to reduce the data to usable form even though it was radioed back to earth from the rocket in a matter of seconds.

The Navy was assigned the task of developing the Vanguard rocket and the earth satellite following the President's announcement in mid-1955 that the U. S. would launch a satellite for scientific purposes during the International Geophysical Year (IGY). Within the Navy, the Office of Naval Research (ONR) both under contract and at the Naval Research Laboratory (NRL) had long been active in upper atmosphere studies (see page 24). NRL had been using high-altitude research rockets since 1946, and had fired 12 of the *Viking* rockets and numerous smaller *Aerobee* rockets. The Laboratory had obtained a great deal of valuable information in this manner that could be applied to the Vanguard program.

A three-stage rocket was decided upon as the Vanguard design. Some of the nation's leading scientists, its biggest industries, and the Navy's scientific labs were called upon to develop such a vehicle.



EASY DOES IT—Second stage of Vanguard test vehicle is lowered into place.

Their first stage was a finless rocket of cylindrical design using integral fuel tanks, and of a "monocoque" type of construction. This type of construction called for the metal skin to be stretched over the frames and longitudinal members, leaving the interior free of braces and cross members that would have interfered with the installation of equipment.

The first-stage engine was designed to develop 27,000 pounds of thrust with an operating time of about 150 seconds, long enough to carry all three stages to an altitude of 36 miles before the first stage burns out and drops.

When the firing switch is thrown a pyrotechnic igniter fires, partially opening the liquid oxygen valve and, a short time later, the fuel valve. The two ignite in the thrust chamber and when satisfactory combustion is indicated the tanks holding hydrogen peroxide and a permanganate solution are opened and the mixing of the two produces a hot steam which is forced against the turbine blades of the turbo fuel pump. This pump forces large amounts of the liquid oxygen and fuel mixture into the thrust chamber where it ignites, bringing the motor to main stage (full power).

In theory a rocket works like the recoil of a shot gun which drives the butt into your shoulder when the shell explodes. If the gun were mounted on wheels the explosive force hitting against the breech would drive the gun back several inches. If repeated rounds were fired the gun would build up speed as the expanding gases pressed against the walls of the chamber seeking a path of escape. In the rocket motor, the burning fuel applies force to the walls of the thrust

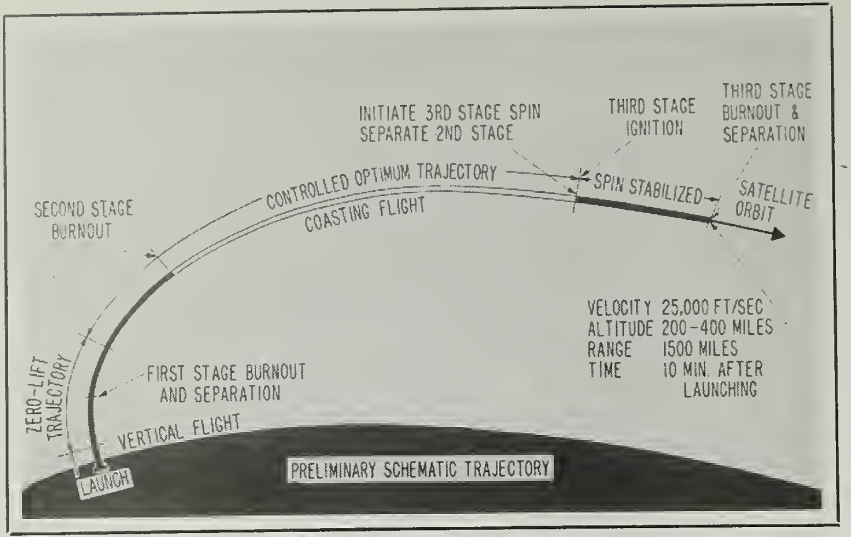


Diagram of satellite's flight

chamber, thrusting the rocket upward as the gases escape out the constricted nozzle of the motor.

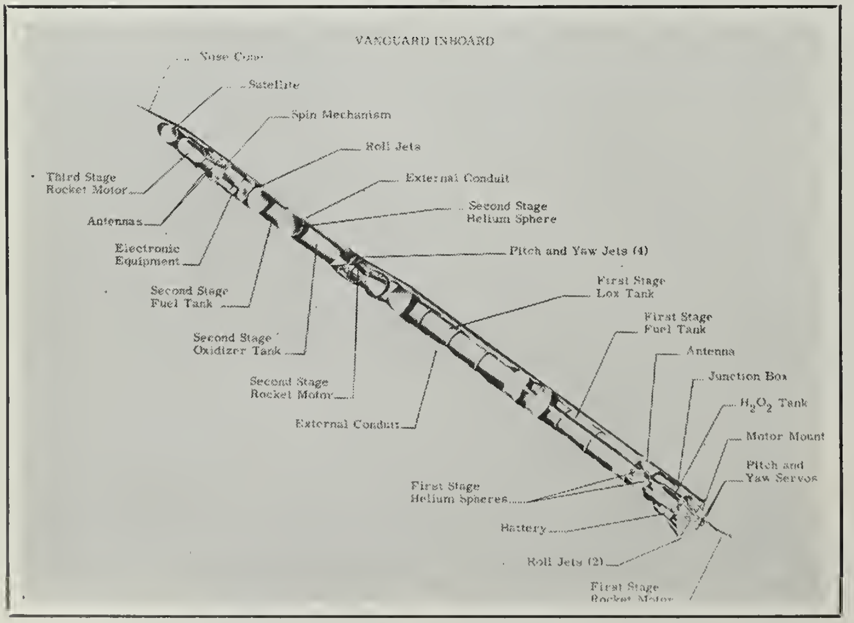
THE 27,000 POUNDS OF THRUST developed by the first-stage Vanguard motor will accelerate the vehicle at a rate of about 40-feet-per-second per second. At the firing, the acceleration is relatively slow, but as Vanguard rises into thinner atmosphere the rate of acceleration increases.

Vanguard's second stage, which provides the thrust necessary to take the third stage to the 300-mile altitude, is similar in design to the *Aerobee* rocket, but larger. Mounted inside the finless cylindrical air frame will be a liquid rocket engine which develops 7500 pounds of thrust using nitric acid and unsymmetrical dimethyl-hydrazine. (Don't ask for this at your local gas station. They don't carry it.)

The flow of the fuel and the oxidizer (nitric acid) into the thrust chamber is caused by forcing pressurized helium into the propellant tanks. The second stage also contains the complete guidance and control system which is used during the first three stages of the flight to space; first stage powered flight, second stage powered flight and second stage coasting flight.

Vanguard's rocket will be controlled by training the thrust of the motors up to a plus or minus five degrees in any direction from the center line of the vehicle. Both the first- and second-stage rocket motors are mounted in gimbals to provide this directional control. The mounting is similar to that used on ship compasses to counteract roll. The usual fins were discarded when experiments proved that they were useful only at low altitudes where the atmosphere is relatively heavy, while at high altitudes they only added weight.

Cutaway of Vanguard rocket



ACTIVATED BY GYROSCOPES, the movement of the engine will correct any variation in the flight direction of the rocket caused by wind gusts, uneven burning of fuel or changing center of gravity. The gyroscopes will also order changes in course dictated by the guidance equipment known as the Inertial Reference System sealed in the forward section of the second stage.

From the moment the rocket is launched this system records the ever increasing velocity and feeds the information to a master sequence controller which times and programs the flight sequence so that the rocket will follow the planned trajectory. The gyroscopes, one each for pitch, yaw and roll, spinning at 12,000 rpm in jeweled bearings, control the movements of the rocket motors as they guide the vehicle through the sky. As the master sequence controller orders a change of course, the memory circuit which controls the gyros is adjusted so that the pitch can raise or lower the Vanguard rocket's head as required.

ALSO INCLUDED in the second stage is the thick asbestos nose cone which will protect the satellite from the terrific heat generated during the flight through the lower atmosphere. Air cannot move out of the path of the rocket fast enough and is compressed, causing extreme heat which is transferred to the surface of the rocket. At higher altitudes where the air is very thin the nose cone will be discarded and the satellite exposed.

The third and last stage does not fire until the rocket has reached the proper altitude and is on a course that will put the satellite into the orbit around the earth. At that moment, the rocket fires again and the third stage will pull free to speed Uncle Sam's space station into its orbit. At the precise moment when the satellite is to be freed, a spring actuated mechanism separates the satellite from the third stage.

By this time, the first section will already have crashed into the Atlantic Ocean some 230 miles away from Cape Canaveral, followed later by the second stage and the nose cone.

To obtain a true picture of what the aVnguard flight will be like, picture yourself in the control hut at the Missile Test Center on the east coast of Florida. You are surrounded by delicate instruments and the room is filled with a weird green light reflected from radar screens and the scopes of electronic equipment.

A slow and even chant records the passage of seconds as the moment of firing draws near.

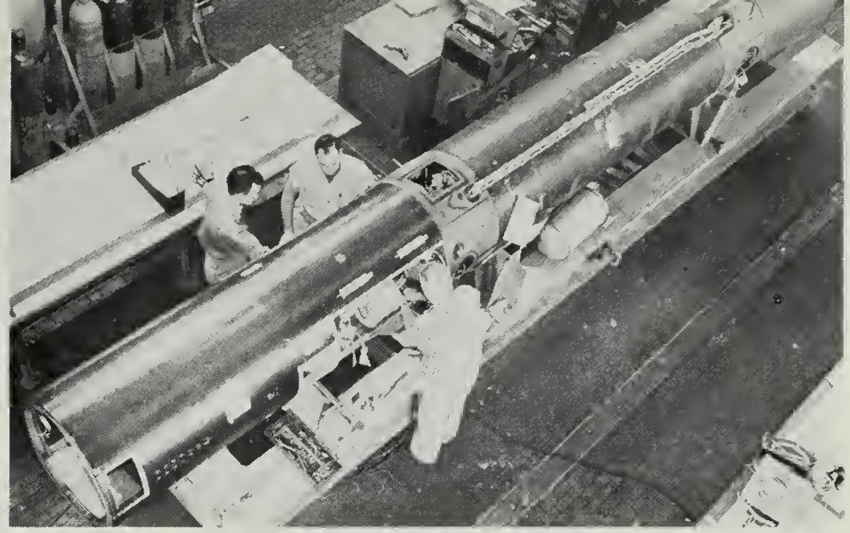
As the numbers fall lower and lower the multitude of red lights on the control panels switch to green showing that another phase of the automatic systems in the rocket is primed and, as the final light turns to green, the launching device is fired.

As the flaming blast of the rocket climbs toward main stage, the base of the device is clouded with steam coming from water coolant instantly boiled as it sprays against the rocket blast. The Vanguard vehicle climbs slowly. The first few feet are delicate ones, with the automatic controls striving to keep the 11-ton space vehicle in balance during its early vertical ascent.

The rocket enine in the first stage will accelerate Vanguard until the first engine exhausts its fuel or is automatically turned off after 150 seconds of flight. In the firing hut at this moment various electronic devices would tell you the rocket was at an altitude of 36 miles and traveling at a velocity of more than 3700 mph.

A ring of explosive charges explodes in the rocket, detaching the dead first-stage from the second, which now comes to life. With the rocket climbing at an angle of 45 degrees the second-stage motor will drive the speed upward to 11,000 mph and the angle of climb will slowly be adjusted by the master sequence planner to 40 degrees and then lower as the rocket climbs toward the 300-mile level.

Before the power of the second-stage rocket motor is exhausted another sharp explosion will send the asbestos nose cone tumbling toward the ocean. At 130 miles the fuel is exhausted and the rocket coasts upward, its speed slowly dropping to 9000 mph as the earth's gravity clutches at the hull.



ROCKET MEN work on the brains of the second stage of Vanguard rocket. *Below:* Rocket blasts off into the night during tests at Cape Canaveral, Fla.

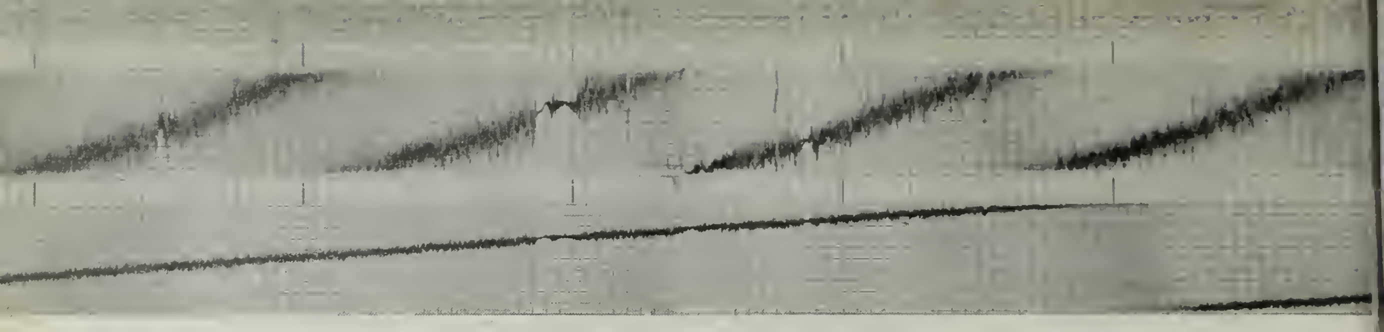
At intervals, small auxiliary jet reactors mounted along the body of stage two fire momentarily as the rocket starts a slight roll. The automatic controls are still keeping the rocket on a heading that will put the satellite into an orbit as close to the desired 300-mile trajectory as possible.

As the Vanguard vehicle slides into the orbit it follows a path parallel to the curvature of the earth. At the precise moment dictated by the "sequence programmer" small rockets (50-pound thrust) will spin the second and third stages to a speed of 200 rpm. Retrorockets on the hull of the empty second stage will blast in the opposite direction freeing the third stage from the second and firing the solid propellant rocket motor.

With the weight of the first and second stages gone, the third stage accelerates and within seconds its speed will have climbed until the satellite is being driven through space at the incredible speed of 25,000 feet every second or 18,000 mph.

As the last drop of third stage fuel burns, the spring mechanism pushes the 21-inch metal globe ahead of the exhausted rocket tube. Vanguard has completed its mission.

—William Prosser, JOC, USN



They'll Track Our New Moons

From the moment the earth satellite is launched from the Navy Vanguard rocket, thousands of "eyes" will be following it during its celestial wanderings, for if the tiny globe is lost nearly all of the scientific benefit to be gained from Project Vanguard will be lost with it.

The electronic eyes of radio will follow the satellite as it blazes new paths through space. Scientists will train telescope-cameras skyward to portray pictorially the passage of the man-made moon. Amateur astronomers will strain their eyes—and necks—to catch a quick glimpse of the metal moon as it travels around the world once every 90-or-so minutes.

The data gathered by these methods will be fed into giant electronic computers which will analyze the sighting information and the material gathered by radio to arrive at a minute-by-minute prediction of the orbit that will be followed by the satellite. In months to come this same material will be studied and restudied in an effort to learn what forces guided the scientific instrument during its life span—which may run into months or longer.

The problem of tracking the satellite is enormous. It will make about 15 revolutions around the earth every 24 hours, each one about 25 degrees farther to the west.

As the earth rotates on its axis the satellite orbit will climb to a point 40 degrees north of the equator and then fall an equal distance to the south. Sighting the speeding 20-inch sphere at its 300-mile altitude will be like trying to find an object the size of a golf ball traveling at the speed of sound some 60,000 feet up.

Two tracing programs have been included in the earth satellite project. The first and most important is the Minitrack system which uses ultrahigh-frequency radio wave measurements to determine the location of the "bird." The second system makes use of telescope-camera stations at 13 different locations which will record the path of the sphere in relation to the stars. This optical tracking program is administered by the Smithsonian Astrophysical Observatory at Harvard University which will also oversee Operation Moonwatch, a program in which volunteers will observe the passage of the satellite and record it on star maps.

Radio Tracking

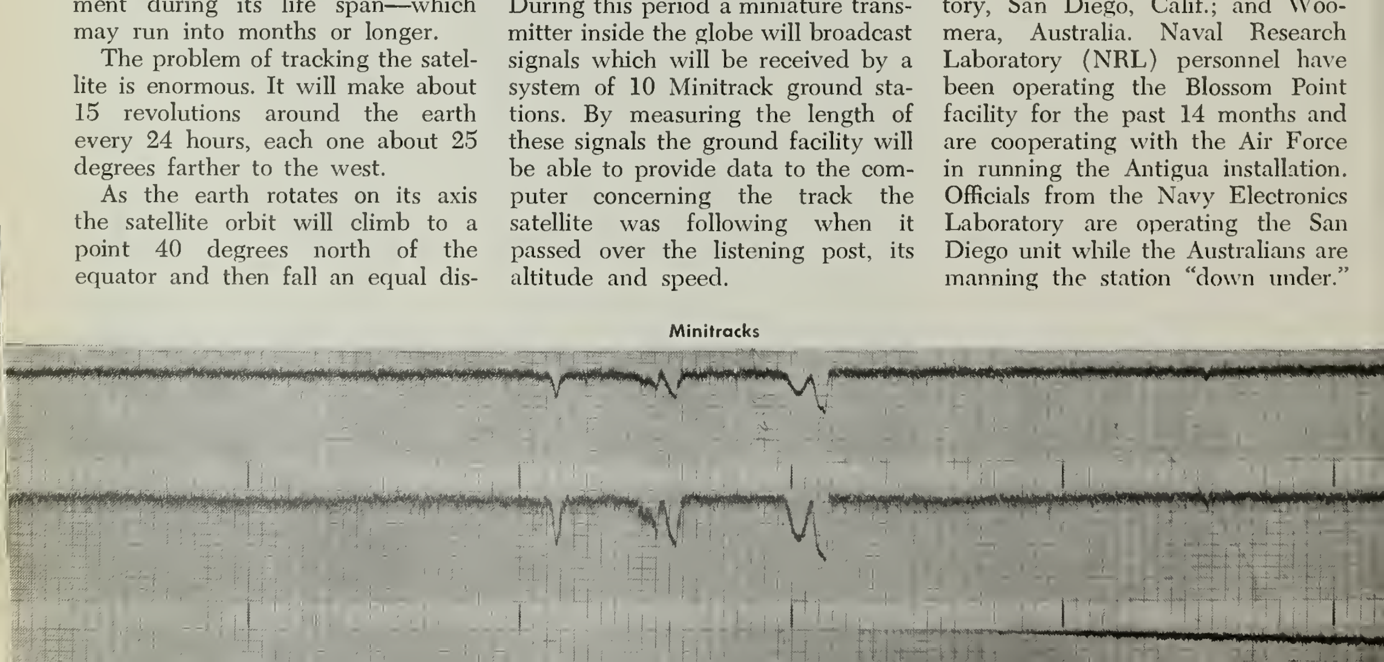
The radio tracking of the satellite will be the most important phase of the observation program during the first two weeks of the satellite life. During this period a miniature transmitter inside the globe will broadcast signals which will be received by a system of 10 Minitrack ground stations. By measuring the length of these signals the ground facility will be able to provide data to the computer concerning the track the satellite was following when it passed over the listening post, its altitude and speed.

Each of the Minitrack installations are scheduled to receive as many as four broadcasts a day from the satellite, with a minimum of two readings every 24 hours expected. After the installations have recorded an aggregate of six radio readings, the Vanguard Computing Center in Washinton, D. C., will be able to predict the orbit accurately enough for the optical observation stations to locate and to track the sphere.

Seven of the Minitrack facilities have been set up along the 75th Meridian where their vertical fan-shaped antennas will provide an invisible fence running north and south which the satellite cannot cross without disclosing its location. These Minitrack units are located at Blossom Point, Md.; Fort Stewart, Ga.; Batista Field, Havana, Cuba; Mt. Cotopaxi, Quito, Ecuador; Ancon, Lima, Peru; Antafagasto, Chile; and Peldehue Military Reservation, Santiago, Chile.

Other stations have been established at Coolidge Field, Antigua, B.W.I.; Navy Electronics Laboratory, San Diego, Calif.; and Woomera, Australia. Naval Research Laboratory (NRL) personnel have been operating the Blossom Point facility for the past 14 months and are cooperating with the Air Force in running the Antigua installation. Officials from the Navy Electronics Laboratory are operating the San Diego unit while the Australians are manning the station "down under."

Minitracks



The rest of the units are being operated by the Army Map Service which has assigned about 14 NRL trained men and one officer for each facility. All of the stations will have one NRL scientific consultant and a commercial technical representative.

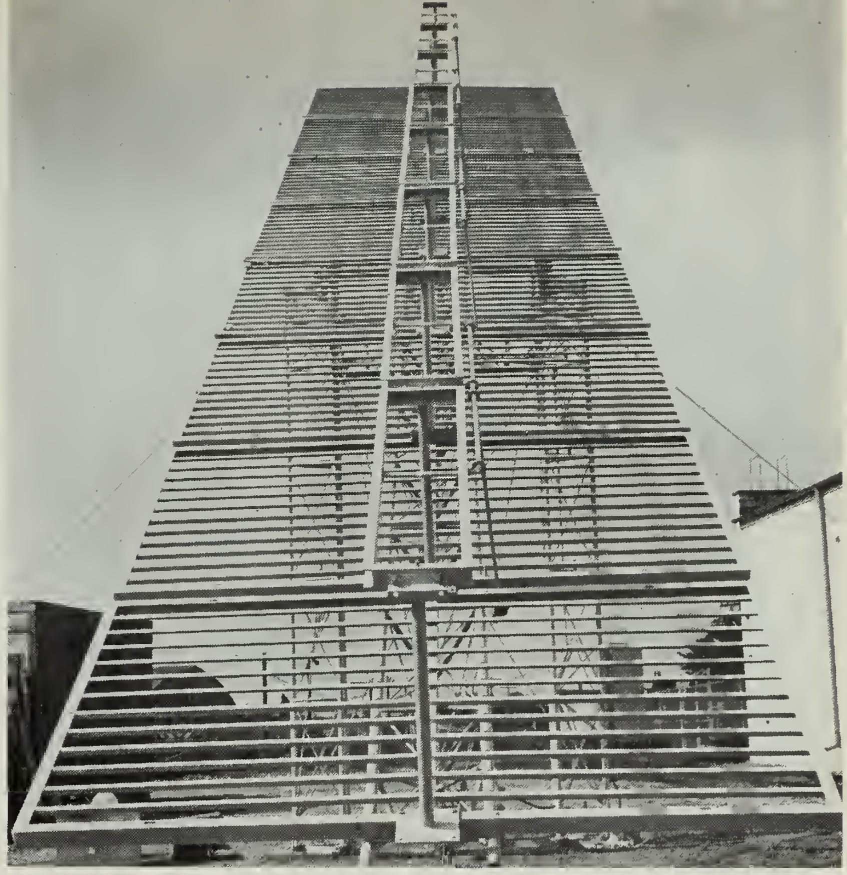
All of the stations have the same general appearance as the Blossom Point facility which served as the test and development area for all of the Navy-designed Minitrack equipment. Located in an isolated part of southern Maryland, the station has been set up in 25 acres of clear land hacked out of the surrounding dense woodlands. In the center of this area are located nine antennas, eight used for tracking the satellite and one for receiving the telemetered information.

The four main antennas are arranged in the form of a giant cross with its 500-foot long legs on the north-south, east-west lines. The antenna system is directional to a certain extent, arranged so that it is most sensitive to broadcasts coming from north or south of the station. Four additional antennas are installed in the center of the Blossom Point clearing to give more precise information concerning the path of the metal moon.

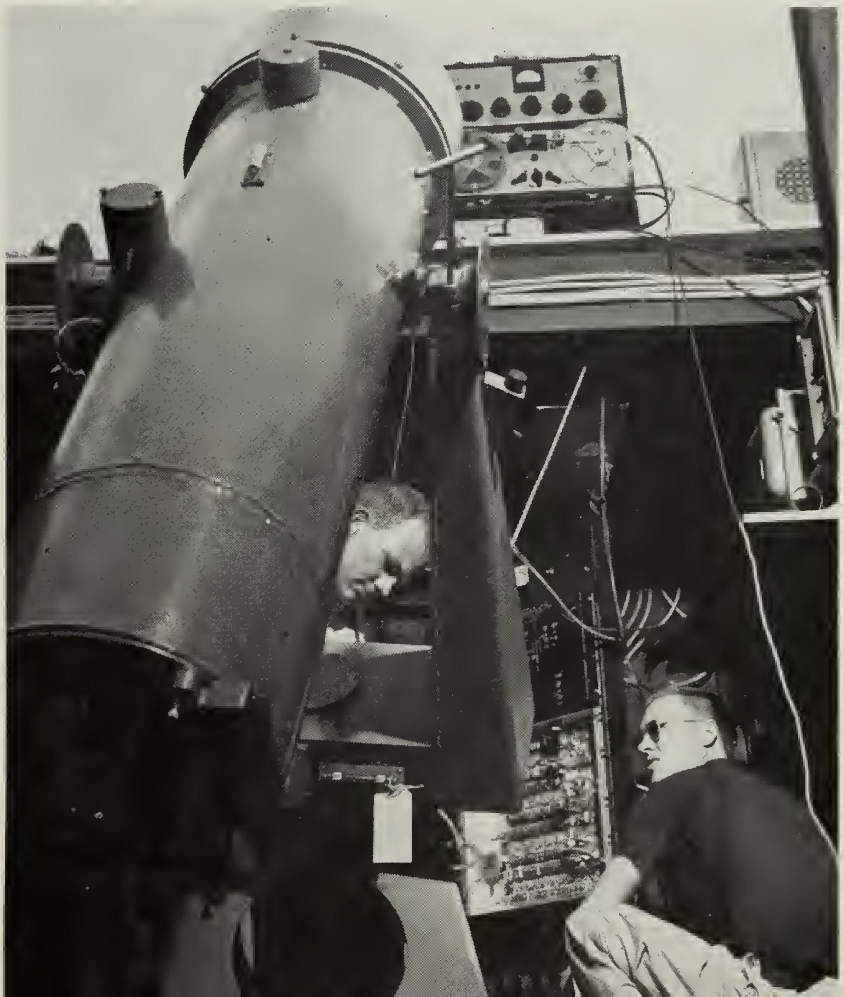
In the center of this 500-foot square array of reception equipment is the Minitrack receiving trailer. Inside the trailer is the electronic equipment necessary to determine the path of the metal sphere and record the information on paper. The Minitrack signals coming from the tiny satellite transmitter are picked up in the front end of the trailer where they are mixed and amplified. They pass into a recorder where the signals are joined by the correct time, fed from an electronic clock (accurate to .0001 of a second), and the phase measurement of the signal received.

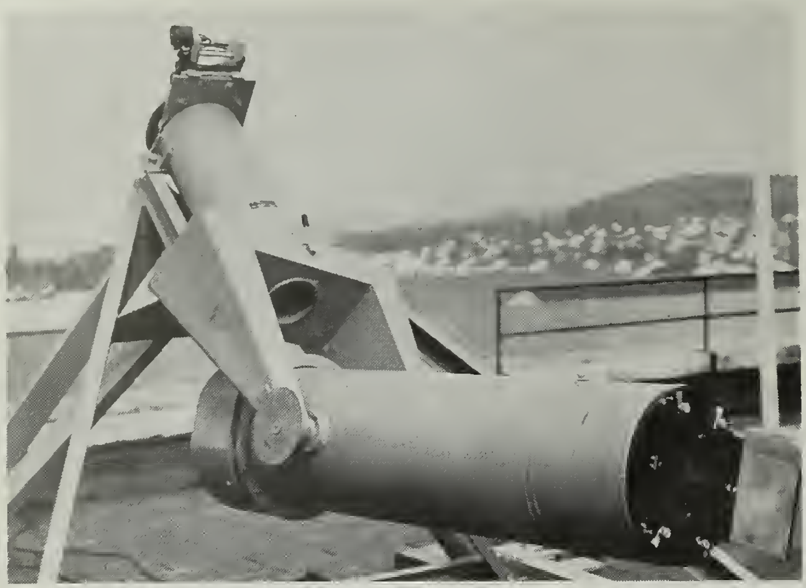
The phase measurement is the minute time difference between the signal received on the north antenna and the south installation (or east and west), by which it is possible to determine the length of each radio beam which, along with the angles of reception, will pinpoint the satellite's position.

The transmitter which broadcasts the vital beam to the earth stations is a tiny unit weighing about 13 ounces, but having a range of more than 4000 miles. It will operate on a fixed frequency of 108 megacycles

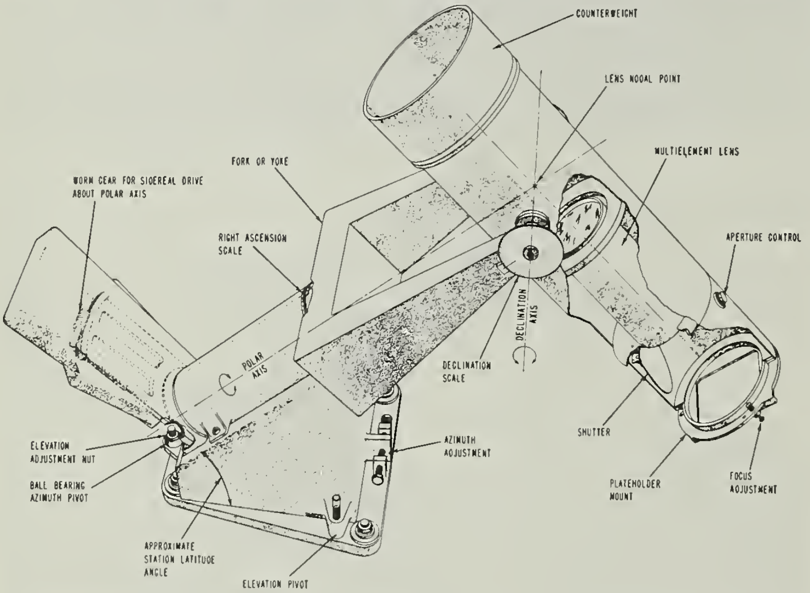


EYES AND EARS—Antenna network will keep track of and pick satellite's 'brains.' Below: Special cameras like this will record on film path of satellite.





FAST PHOTOS—Photographing an object flying about 18,000 miles per hour, calls for quite a camera. Astrographic camera can do it easily.



with a power of 10 milliwatts, which is a millionth as strong as standard radio broadcasts. The seven 1.2-volt mercury batteries powering the transmitter will have a life expectancy of about 336 hours (two weeks), but if solar batteries are perfected by the launching date the transmitter may continue to operate through the entire life span of the metal globe.

A second type of receiving equipment has been developed by the Naval Research Laboratory called Minitrack, Mark II. It will be used by volunteer tracking stations throughout the world to provide scientists with additional transit times from locations other than the 10 prime Minitrack receiving units.

Only two antennas will be used with the Mark II when it is tracking the satellite. The sensitive nature of this equipment was proven when the Blossom Point Tracking Facility received signals bounced off the moon by the giant radar transmitter Diana. Mark II was modified to receive the moon signals on 151 megacycles instead of the standard Minitrack frequency of 108 megacycles.

In addition to tracking the speeding sphere, the Minitrack facilities will also "pick the brains" of the satellite as it flashes overhead. The ninth antenna will focus on the approaching sphere and its beam will trigger a telemetering system which will broadcast the scientific data that it has gathered to a receiver-recorder below. As the satellite moves off on another 90-minute trip around the world the telemetering system will be turned off by a signal from the ground and the instruments will begin to store up scientific data to be broadcast next time around.

The Minitrack facilities will have the task of determining if the satellite achieves an orbit after it is launched from the third-stage rocket. The Antigua station will use special equipment to obtain an initial fix on the satellite immediately after it has been launched. This missile range technique of obtaining an initial fix will show if the globe is orbiting and if so, the route it will follow. Vanguard officials expect to be able to predict the first passage of the satellite with an error of no more than six minutes and to pinpoint its location within several hundred miles.

The Minitrack tracking system is so designed that it can operate with greater speed in all kinds of weather, gathering data on the satellite in orbit. However, it operates only so long as the transmitter in the sphere continues to send the vital signals.

Optical Tracking

Only through the use of the data received from the network of Minitrack stations can the 13 prime optical tracking sites scattered around the globe locate and photograph the satellite's position in orbit in relationship to known positions of the stars. Two of the 10-foot cameras will be located in the U. S.; one in the Hawaiian Islands; four in South America; three in Africa; and one each in Japan, India and Australia.

The visual tracking program, being conducted by the Smithsonian Astrophysical Observatory, will be particularly useful after the Minitrack transmitters run down.

The cameras, which have the power to photograph the satellite at a distance of 1500 miles above the earth, have a 30-degree field of view and a 20-inch aperture. A strip of 55-mm motion picture film will be exposed during the satellite passage and time will be measured to an accuracy of .001 of a second. The resulting photographs will pinpoint the exact location of the satellite at a given time against a background of stars whose movement and positions are known.

The same system of charting the path of the satellite against a background of stars will be used in the visual tracking program, Operation Moonwatch. About 150 volunteer observer teams throughout the world will patrol overlapping sections of the sky through wide-angle telescopes along the north-south line beneath a "T"-shaped pole. The time the metal moon first enters the field of view, disappears behind the crossbar on top of the pole, reappears and then disappears will be recorded and the path of the satellite will be traced onto a star map, which will be sent to the observatory.

One of the principal functions of the Moonwatch teams is to obtain independent position data on the satellite which will be of value in alerting the photographic stations. However, the observers will depend initially on Minitrack reports from the Vanguard Computing Center to locate the satellite as it appears, traverses the sky and disappears below the horizon in a very few minutes.

TRANSPARENT GLOBE shows radio fence to be formed by Minitrack stations placed along the 75th meridian near Washington D. C., to tip of S. America.

Computing Center

The Computing Center will begin predicting an orbit as soon as the first Minitrack measurements are reported and will continue to do so with ever-increasing precision as more data becomes available. A second computing installation at the Massachusetts Institute of Technology will work with the data obtained by the photographic stations and the Moonwatch groups. The satellite orbit predictions of both installations will be correlated.

Both computing centers will use electronic data processing systems to perform the calculations necessary to keep pace with the orbit of the satellite. During the calculations, electronic impulses speed back and forth over a complex of wires at a rate of 186,000 miles per second. They reverse direction a million times during the same interval, with the speed being harnessed by the circuits within the computer.

When the system is put into operation the Minitrack stations have already forwarded the data gathered during the last satellite pass to the Vanguard Control Center at the Naval Research Laboratory. Carried via landline, the information arrives at the Computing Center on punched paper tape and is automatically punched into cards. The cards feed the information into the computer's core memory storage unit which adds the data to the instructions already received. The results are produced on magnetic tape at the rate of 2500 words per second and later converted to printed form. Each word is a group of symbols which expresses digits or alphabetic characters in machine language.

In printed form the electronic device predicts the satellite's position in latitude and longitude on a minute-to-minute basis. It tells which Minitrack stations should be hearing the signals, what optical station will next see the satellite and also tells the daylight condition at that point (twilight, dawn, daylight, night, etc.) Included in the predictions is the metal moon's expected altitude.

In order to accomplish these predictions (41,600 additions or subtractions per second; 4100 multiplication or division of 10 digit numbers per second) the computer relies on high-speed "memory" devices which store both data and instructions in readiness for calculations. Magnetic tapes, and drums, and the newest system called "core memory," permit over nine million words of information to be stored in the machine. More than 147,000 tiny memory cores are available in the computer, each about the size of a pinhead and shaped like a doughnut. They are strung on a complex of wires through which the electrical pulses pass, altering the magnetic state of the tiny core. A line of these altered or unaltered cores stands for a certain word or number.

The predictions of the computer are either produced on a line printer, on a magnetic tape or on punched cards. It can also picture its output on a cathode ray tube recorder similar to a TV screen, in the form of graphs, engineering symbols, figures or words and numbers.

The predicting of the orbit to be followed by the satellite is done in a matter of seconds once the machine is fed the raw material. The satellite orbit forecasts are flashed to the control center and then relayed to the appropriate Minitrack or optical tracking station so that more data can be gathered to feed into the computer which will predict more precise orbit information about the future trips of the man-made moon.

—William Prosser, JOC, USN.

Navy in Space — How and Why

THE STARTLING ANNOUNCEMENTS of rocket and missile accomplishments in recent months have suddenly caused eyes and minds to be focused skyward and beyond into space.

What's behind all this and just how does the Navy—traditionally a sea-going outfit—find itself involved in space research?

To start at the beginning, you must go back to 1 Aug 1946. That's when Public Law 588, enacted by the 79th Congress and approved by the President, established the Office of Naval Research "to plan, foster, and encourage scientific research in connection with its paramount importance as related to the maintenance of future naval power and preservation of national security."

When established, the Office of Naval Research assumed the responsibility for supporting the peacetime research in nearly every area that had implications for the Navy. This first peacetime venture by the U. S. government into large-scale support of basic work in science helped to replenish the reservoir of fundamental knowledge that had been exhausted by years of extensive wartime development.

As the Navy's representative in the world of science, ONR had the mission to make available whatever science has to offer which might result in modern weapons, devices, and techniques, so that now and in the foreseeable future the U. S. Navy will be superior to any in the world.

To do this, ONR must know what is going on in science that will help the needs of the Fleet. It must know the latest theories concerning the physical forces acting on a moving body underwater, such as a submarine; about cosmic ray activity and very high-altitude weather conditions for high-speed, high-altitude flight; the areas scientists are exploring in order to become aware of new findings that might hold some promise for use to the Navy.

On the other hand, ONR must do much of this research itself or see to it that some other activity does it. A good example is the broad, continuous program of upper atmosphere research which the Office of Naval Research launched as one of its first endeavors back in 1946. Initial plans in this highly specialized field of research called for the establishment of a stable platform for high-altitude observation of atmospheric physics, nuclear energy and cosmic radiation.

THE BASIC PROBLEM was to develop a vehicle capable of carrying the necessary instruments to sufficient altitudes and remaining there long enough to make the desired observations. Previous vehicles, including aircraft, rockets and rubber balloons possessed inherent limitations for extended observations in the stratosphere. Remember, this was 11 years ago.

Rocket Test—1947

A man-made satellite appeared to be the only solution to this space platform. The idea of using satellites back in 1946 was neither a new idea nor a "dream," even at that time. Much had been written about them and the feasibility of satellites had been proven as early as the 16th century through Johann Kepler's laws of planetary motion.

Although satellites appeared to be the only logical platform for conducting high-altitude research, a means of getting them into space had not as yet been developed.

Meanwhile, the Navy's upper atmospheric research program was continuing through the development of new research tools and by making the best use of what was available.

The Office of Naval Research developed high-altitude plastic balloons to carry instruments and eventually human observers high into the stratosphere. At the same time, (Dec 1946) the Naval Research Laboratory began work with research rockets, using at first the German V-2 made available by the Army, and then Navy-developed rockets such as the *Viking*, *Aerobee* and *Aerobee-Hi*.

One of the Navy's *Viking* rockets carried a camera to 158 miles, the greatest height from which photographs of the earth have been taken. *Aerobee Hi* rockets, also developed for the Navy, have gone as high as 180 miles, a record for a research rocket.

Until early 1954 all *Viking* rockets were devoted to upper atmosphere research. At that time, however, two *Viking* rockets were fired (in May 1954) with equipment to investigate the limits of precise tracking for guidance and re-entry experiments. Both of these test flights proved highly successful.

By this time, technological advances in power plants and in aerodynamics had progressed to the stage where the possibility of manned aircraft and other types of vehicles flying beyond the atmosphere was becoming closer to a reality.

REALIZING THAT A DEFINITE need for a space platform existed, Navy scientists, in June 1954, decided that something other than just another study should be done about launching an earth satellite.

Shortly after this decision was made, a meeting was held at the Office of Naval Research in Washington, D. C., (on 25 Jun 1954) to determine the best way to set up a research program using satellites as a research tool.

Army and Navy scientists attended this initial conference and decided that by using existing rocketry—an Army *Redstone* missile as the main booster, on which would be mounted a multiple cluster of *Loki* rockets—that it would be possible to launch a satellite within the next two years, if such a project was undertaken as a joint Army-Navy effort.

After lengthy discussions as to the size of the satellite and the types of information which a satellite could collect, it was agreed that enough information could be obtained from a minimum-weight satellite to warrant going ahead with this type of project as the first step in an eventual large, all-out satellite program.

Army and Navy scientists agreed at that time that even a five-pound satellite would teach the launching techniques and tracking methods, and could be done within a much shorter time than would be required for a fully instrumented satellite.

It was further agreed that there were many possible methods and many rocket combinations which could be used to place the satellite in an orbit, but that the *Redstone-Loki* combination was at that time capable of putting a satellite in an orbit without new major developments.

The conference came to these conclusions:

- A satellite could be placed in an orbit by using the *Redstone-Loki* combination.
- Such a program was justifiable from a scientific standpoint.
- A satellite program should be established.
- Such a program had to be organized as a team effort.

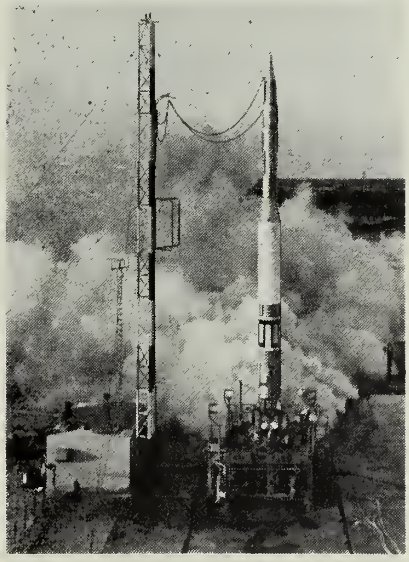
WHEN THE ARMY notified the Navy of its willingness to take part in a satellite program, the Chief of Naval Research authorized the Air Branch of ONR to go ahead and conduct the preliminary studies necessary to establish this program. Working closely with the Army, this initial satellite project was outlined and the divisions of responsibility were planned.

It was agreed that the Navy would handle the design, development and construction of the satellite, arrange for the tracking facilities, the coverage of logistic support, and record the tracking data. The Army would be responsible for the over-all missile design and the construction and launching of the satellite's launching vehicle. With these agreements firmed up, the joint Army-Navy satellite project was given the name "Orbiter."

The Army and Navy went ahead with these plans and in January 1955 invited the Air Force to join them. In the meantime, three contracts were let. The first, was for a study to determine the requirements for making the satellite visible by optical and electronic means. The second was for the design and development of the guidance system to place the satellite into its orbit, and the last was a study to cover the development of the *Loki* cluster.

The problem of logistic support became quite evident in Orbiter's early stages. Men and equipment would have to be shipped to all parts of the world. A launching site and tracking station would have to be built. And then supplies for the operating crews of the launching and tracking facilities had to be available. When approached on this matter, a representative of the Chief of Naval Operations said, "Tell us what you want moved and where to and we'll see that it gets there." That settled the so-called logistic problem.

On 23-24 May 1955, it was decided that a minimum-weight satellite could be established with known equipment. An equatorial orbit was considered best for the first satellite, to facilitate tracking and recording; and then either a polar orbit or an orbit inclined to the equator for later vehicles. At this time, the Naval Research Laboratory made available its Minitrack system, as a possible electronics tracking mechanism.



Vanguard Test—1957

WHILE THE ARMY AND NAVY were going ahead with their plans to launch a satellite, groups of civilian scientists were also working on similar plans. The U.S. National Committee for the International Geophysical Year had requested the National Science Foundation and the Department of Defense to support an earth satellite program as part of the U.S. effort for the IGY.

This proposal was accepted in July 1955 and Project Orbiter was cancelled since the basic information which it sought could be received through the IGY satellite program.

Even while plans for Orbiter were underway Navy scientists were continuing to conduct high-altitude research with balloons and rockets. Several months ago, NRL rockets made the first quantitative intensity measurements of micrometeors, those particles which are considered to be a possible serious hazard both to earth satellites and to the flight of long-range missiles through the upper atmosphere.

This work by the Naval Research Laboratory not only required a proficiency in rocketry but in rocket instrumentation, particularly in the art of telemetering the information back to earth. Sending information from rockets high in the stratosphere to the ground via radio became a fine art at NRL. This experience resulted in the Navy, specifically NRL, being assigned the responsibility of designing and launching the American earth satellite as part of Project Vanguard.

FROM THE VERY BEGINNING Project Vanguard . . . the Department of Defense phase of the U.S. earth satellite program . . . has been purely a scientific program. Although it is possible that a military missile already under development might have been able to launch a satellite before the scientific research rocket developed for Project Vanguard there were good reasons for planning it as a pure research project completely divorced from our military missile effort. It made it possible for virtually the entire earth satellite program in this country to be unclassified. This means that information about it is freely available to scientists throughout the world.

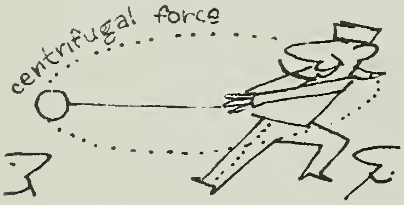
The advancement of scientific knowledge learned through basic research and the wide dissemination of this increased knowledge have been basic policy of the Office of Naval Research since its establishment and, as a result, the major portion of the Navy's basic research program is unclassified.

In this same vein, you will notice that throughout the past 11 years of rocket development and high-altitude flights, the prime interest of the Navy, in particular the ONR-NRL team, has been basic scientific research—finding out more and more about the envelope of atmosphere that surrounds the earth. And that is precisely the announced objective of the upper-atmosphere program of the International Geophysical Year, and the reason for Project Vanguard.

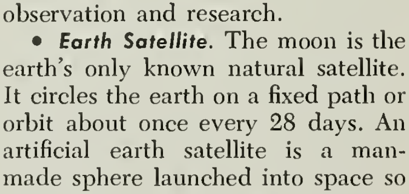
Vocabulary of

HERE'S A GLOSSARY of some of the scientific phrases and terms that you'll come across in reading the articles in this issue about the Navy's role in support of the International Geophysical Year.

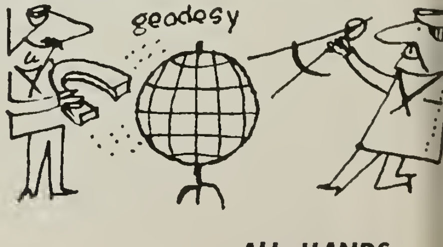
- ***Airglow.*** The glow or light, other than that from the stars and the moon, which you see at night. The sun's radiation causes the atoms and molecules of the oxygen, nitrogen, sodium, hydrogen and other gases in the earth's atmosphere to act as miniature powerhouses and store up the energy of the absorbed sunlight. At night, this stored up energy becomes visible. Although it is five times as bright as that given off by all the stars you see in the sky, much of the light created by airglow is invisible.



- ***Astrophysics.*** The application of the laws and principles of physics in relationship to the constitution of the celestial bodies. It applies to almost every phase of astronomy.
- ***Atmosphere.*** The air or gaseous body that surrounds the earth or any celestial body. In the case of the earth, it includes the air we breathe and the entire gaseous envelope that presses at all points upon the earth's surface, as well as that which extends all the way out into space. This ocean of air is estimated to weigh more than 5,000,000,000,000,000 (five million billion) tons.
- ***Atom.*** A particle of matter consisting of electrons (negatively charged particles) surrounding a nucleus made up of neutrons and protons (positively charged particles). The number of electrons surrounding the nucleus is equal to the number of protons in the nucleus so that the atom itself has no net electrical charge.
- ***Auroras.*** Commonly referred to as Northern and Southern Lights, they are colorful glows or light effects that occur in the atmosphere when streams of electrically charged particles from the sun strike the upper air. They are usually seen mainly in polar or high latitudes because the charged particles are attracted by the earth's magnetic poles. Auroral displays, seen only at night, look like streamers of light, somewhat like distant heat lightning or masses of multi-colored flashing lights.
- ***Celestial.*** Refers to the sky or visible heavens. Thus, a celestial body is a star, planet, comet or other matter which exists in the universe.
- ***Centrifugal Force.*** The force which makes an object revolving around an axis (for example, a weight being whirled around at the end of a string) want to move directly away from the axis.
- ***Cosmic Rays.*** Extremely high energy particles, traveling at almost the speed of light, which are bombarding the earth from space. These particles are mostly hydrogen nuclei (protons), but nuclei of other elements are also present.
- ***Cosmology.*** The general science of the universe. It covers all of the parts, laws and functions of the universe that are already known and those that can be obtained through observation and research.



- ***Earth Satellite.*** The moon is the earth's only known natural satellite. It circles the earth on a fixed path or orbit about once every 28 days. An artificial earth satellite is a man-made sphere launched into space so it circles the earth in somewhat the same manner as the moon does.
- ***Ellipse.*** The curve formed by slicing through a cone. The shape of this curve may vary from being an almost perfect circle to a long, narrow shape similar to a rubber band.
- ***Elliptical Orbit.*** The ellipse-shaped path followed by a heavenly body as it moves about the center of the system to which it belongs. The earth, its moon and the planets all have elliptical orbits.
- ***Exosphere.*** The outermost portion of the atmosphere where the atmospheric particles are so few that they very rarely collide with one another. Its lower boundary is about 600 miles from the earth.
- ***Geodesy.*** The science of determining the size and shape of the earth. Since the variation of gravity over the earth's surface is important for determining the earth's shape and in determining positions accurately, gravity studies and surveys are often included under this science.
- ***Geomagnetism.*** The study of the earth's magnetic field. It is also called terrestrial magnetism.
- ***Geophysics.*** *Physics* is a comprehensive name for the branches of science which deal with those natural phenomena which are not biological and not merely descriptive. *Geophysics* is the name for those parts of physics which are concerned with the solid earth, the oceans and the atmosphere. Seismology, geomagnetism, geodesy, meteorology, atmospheric physics, glaciology, hydrology and oceanography are subdivisions of geophysics.
- ***Gravity.*** The force of mutual attraction between material bodies. Sir Isaac Newton found that this force varied directly with product of the masses concerned and inversely as the square of the distance between them. It is this attraction which draws objects (such as Newton's apple) toward the center of the earth and gives them the property of weight.
- ***International Geophysical Year (IGY).*** An 18-month-long study of this world and the natural forces from within and without which af-



Space Sense

fect it. Studies by scientists of 64 nations began 30 Jun 1957 and will continue through 31 Dec 1958.

• ***Ion.*** An atom (or, in some cases, a group of atoms) which has an electric charge because the number of electrons surrounding the nucleus does not equal the number of protons in the nucleus.

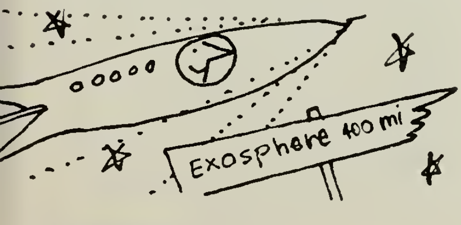
• ***Ionization.*** The formation of ions. Among the ways ions may be formed is the knocking of electrons out of a neutral atom during a collision with another particle.

• ***Ionosphere.*** A layer of air in the upper atmosphere extending from roughly 40 miles to an altitude of about 400 miles, consisting of several layers of ionized gases known as the D, E, F, and G layers. These layers bend radio waves back to earth where they originate, making possible long-distance communications.

• ***Liquid Oxygen.*** This gas is compressed until it becomes a liquid which will support combustion in a rocket engine in the near vacuum of space. In its compressed state it has a temperature of —297 degrees F.

• ***Magnetism.*** Magnetism is demonstrated by the attractive force that exists between a natural magnet (lodestone) and a piece of soft iron. This attraction exists even when they are not in contact, and this action-at-a-distance is said to be due to the magnetic field or field of force around a magnet. Hans Christian Oersted found that an electric current has a similar field of force which affected that of a magnet (1820). About 1825 Andre Marie Ampere concluded that a magnet is due primarily to electric current circulating within the molecule, which is the view still held today.

• ***Mesosphere.*** The middle atmosphere extending from the top of the stratosphere (about 20 miles) into the ionosphere.



• ***Meteor.*** A celestial body that enters the earth's atmosphere at great speed and begins to burn owing to the friction of the atmosphere, making it visible from the earth. It is popularly known as a shooting star.

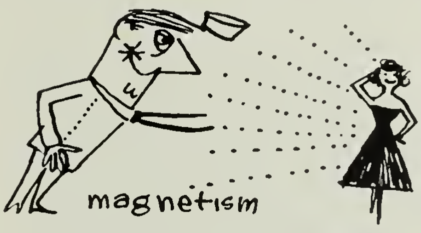
• ***Meteorite.*** A meteor that strikes the earth.

• ***Meteoroid.*** The celestial particle which becomes a meteor upon entering the earth's atmosphere. Some particles are invisible to the naked eye and weigh about one hundred-millionth of an ounce (micrometeors) while others may weigh millions of tons. The meteorite that struck in Arizona is estimated to have weighed more than 10 million tons.

• ***Meteorology.*** The study of the atmosphere and its activities, especially those that affect the earth (wind, rain, clouds, storms, etc.).

• ***Minitrack.*** A radio tracking system used to record position signals from a vehicle in flight from which high frequency radio waves are being transmitted. The signals are received by special ground stations.

• ***Moon.*** This is our nearest space neighbor and will more than likely be the first target of space voyagers. Its mean or average distance from the earth is 238,840 miles and it travels once around the earth every 27.32 days.



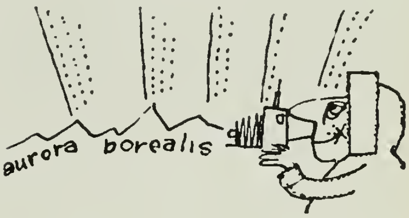
• ***Oceanography.*** The study of the ocean, its currents, composition, etc.

• ***Orbit.*** The path a celestial body follows as it circles the center of its system (for example, the earth's path as it circles the sun).

• ***Ozonosphere.*** Located in the upper reaches of the stratosphere, this layer of the atmosphere is characterized by the concentration of ozone gas found there. The ozonosphere acts as a shield for the earth, filtering out the major portion of the invisible ultraviolet rays which would destroy all life if the total amount entering the ozonosphere reached the earth.

• ***Project Vanguard.*** The Department of Defense portion of the U.S. Earth Satellite Program. A tri-service project under Navy management, Project Vanguard includes development of the satellite, the launching vehicle, launching facilities, the radio tracking of the satellite and the recording of data from the satellite.

• ***Rocket.*** A thrust-producing system or a complete vehicle which derives its jet-like thrust from ejection of hot gases generated from material carried in the system, not requiring intake of air or water.



• ***Satellite.*** An attendant body that revolves around a larger one, such as the earth's moon. Natural satellites are usually classed as secondary planets in the solar system.

• ***Solar.*** Pertaining to the sun; that is, sun heat; solar heat.

• ***Solar System.*** Our sun and the group of celestial bodies including the earth, which revolve around it. The system consists of celestial bodies including the sun, nine planets, 28 satellites and more than 1500 minor planets or asteroids.

• ***Stratosphere.*** A portion of the atmosphere beginning above the troposphere (eight miles) and extending to an altitude of about 20 or more miles.

• ***Ultraviolet Rays.*** Light rays whose frequency is higher than the frequency of light rays visible to the eye.

• ***Universe.*** The entire celestial cosmos including our solar system, other systems, stars, meteors and all other celestial bodies.

Saturn

Mars

Moon

What's It Like Up There?

IN HIS EFFORTS to gain knowledge about the earth's atmosphere, man has learned that the ocean of air surrounding this planet is several hundred miles thick with no pronounced boundary. The atmosphere is divided into four different layers: The *troposphere* where we live; the *stratosphere* where we fly; the *ionosphere* which we are now exploring with rockets; and the *exosphere* where space begins.

The air found in these layers is a mixture of 21 parts of oxygen and 78 parts of nitrogen. The remaining one part is composed mostly of argon, with traces of neon, helium, krypton, xenon, ozone, hydrogen, carbon dioxide and water vapor. This mixture of gases exerts a pressure of 14.7 pounds per square inch of earth surface at sea level, but as you go higher its density thins.

It has been estimated that if all the air surrounding the earth were compressed to the density of that at sea level it would be only five miles thick. Mount Everest (and several other peaks) would project into space and a man would be able to launch a satellite simply by climbing to the top of one of these peaks and throwing it. However, in real life it doesn't work this way.

The troposphere extends upwards some eight to 10 miles. It is the area where most clouds form and where storms rage. As we climb higher the temperature drops to a low of 70 degrees below zero and if in a balloon, we would be knocked about by winds exceeding 80 mph. The barometer would drop as we rose higher, but the chemical makeup of the air would remain the same.

If you were to make this ascent without auxiliary oxygen you would have been uncomfortable at two miles, breathing hard at three miles, unconscious at four, and dead long before you reached the next layer called the stratosphere.

The stratosphere, home of jet airplane pilots and the high-altitude balloon scientist, extends from the troposphere to an altitude of about 60 miles. Inside these boundaries we find the last clouds, and the air around us begins to warm after 20 miles until it reaches a temperature of 170 degrees only to fall again to many degrees below freezing. Here the winds may rise to several hundred miles per hour to tear at research vehicles. Wispy clouds of dust carried up from the lower level of air may dance 50 miles above the earth. In this layer we find one of the most important parts of our atmosphere, the *ozone* layer.

Nearly all of the atmosphere's ozone gas is found between 15 and 30 miles above the earth in a layer that, unknown to the majority of us, protects our very lives. The nature of this gas enables it to absorb the majority of the sun's ultraviolet rays, thus saving the human race from the granddaddy of all sunburns. If these rays penetrated to earth it would mean certain death for mankind, but conversely if the ozone layer became too thick and shut off all the ultraviolet light the earth would soon lose its supply of Vitamin D. But again the nature of this gas protects us, for it is dependent on the ultraviolet light which creates it—more rays, more gas—less rays, less gas—maintaining a perfect balance.

There's A Lot We Need
To Know About This
Ocean of Air Around Us

The ionosphere—Artificial satellites and the rockets for research are launched into this next layer. The ionosphere extends from 40 to 400 miles above sea level. Scientists have succeeded in exploring this area only with high-altitude rockets and high-frequency radio beams. In this electrified layer the sun's radiation has broken down the molecules of air, producing electrically charged ions which form into layers. These ions reflect radio signals back to earth, making possible long-distance communications. But these same layers allow the very short radar wave lengths to pass into space to bounce signals off the moon.

The full effect of solar flares and sunspots are in this electrified layer. When these occur, the sun is giving off tremendous amounts of electrical energy which cause disturbances in the ionosphere, disrupting radio communication for hours or even days. The various ion layers, each of which affects a different type of radio communication, are constantly swaying and shimmering. The band closest to the earth is the D-layer which reflects the long radio waves used for standard broadcast, but allows the short radio waves to penetrate to the E-band which reflects radio transmissions of shorter wavelength such as those employed for police broadcasts. The uppermost layers are the F and G bands which serve as the reflecting mirrors for shortwave stations.

In order to keep track of these ever changing layers, more than 150 radio stations located around the world gather data on the fluctuations and variation of the ion-layers. This information is used to prepare elaborate charts which in essence tell radio stations the best frequencies to use and the results that can be expected by transmitting at various times of the day.

Shooting stars appear in the lower reaches of the ionosphere as the falling meteorites ram into the thicker atmosphere and burn, but near the top of this layer you are virtually in space. Wind velocity climbs to 300 mph and the temperature may be as high as 4000 degrees, far higher than the temperature of liquid iron. But it is heat without heat, for the temperature is contained in the individual molecules of air speeding about in the near vacuum of space. A rocket passing through this area would not be affected by this heat because there are few molecules to pass the heat to the surface of the vehicle. The rocket might even lose heat in this area, radiating some of its body warmth into space.

The exosphere lies beyond the ionosphere. Scientists detect gas in this region above 500 miles, but in such small amounts that it no longer matters and even that fades out in space. To set a limit one might say that space begins between 400 and 1000 miles above the earth and continues on and on, farther than our biggest telescope can see, or to a point where radio signals disappear into oblivion, to infinity.

From this dark void the earth's atmosphere is constantly being bombarded with invisible rays of unknown origin. Cosmic rays with particles ranging in size from the elusive electrons to the nuclei of heavy atoms, crash into the atmosphere at speeds approaching that of light, 186,000 miles per second. The debris of their impact showers down on earth. Others hurl a constant stream of electromagnetic radiation at the roof of the world and joining in the bombardment are visible light rays, invisible ultraviolet and infrared radiations, corpuscular streams from the sun and radio waves.

Also pouring into the ocean of air surrounding earth is an assortment of materials that could be termed space trash. Some of this assortment of metal and rock arrives at a speed of 10 miles per second; others may have a velocity six or more times greater. These meteors come in many sizes, but the majority are invisible to the eye. These are called micrometeors and it has been said that 750 billion of these particles each weighing about one hundred-millionth of an ounce reach the atmosphere every 24 hours. Their origin is also a mystery. It is known only that they come from "out there."

NAVY ROCKETS such as *Viking* have carried instruments high into the sky to record what goes on up there.

"Out there" are the stars we see at night and the sun around which our nine planets rotate; but the most pronounced heavenly body (with the exception of the sun), is our moon. This lifeless body whirls around us as we travel around the sun. The moon never shows more than one face to the earth as it travels in its orbit a mean distance of 239,000 miles away.

In theory, man needs only to develop a rocket that can equal or exceed the speed necessary to free it from the earth's gravitational pull to travel to the moon. This speed of escape is slightly more than 25,000 mph, only 7000 more than that expected of Vanguard which will launch the earth satellite.

The other occupants of our part of the universe are Mercury, Venus, Mars, Jupiter, Saturn, Uranus, Neptune and Pluto. The planet nearest the sun is Mercury which is only 36 million miles from the solar body. The earth is third at a distance of 93 million miles while the last known planet in this universe is Pluto which has an average orbit distance from the sun of 3675 million miles. If you attempted to fly to Pluto in a rocket traveling 25,000 mph it would take you 6125 days or almost 17 years.

That's a long tour of SPACE DUTY.—William Prosser, JOC, USN.

SKYHOOK BALLOONS have been used to launch *Deacon* rockets from high up to bring back the secrets of the earth's atmosphere from new heights.

Highlights on Vanguard

Not long ago, Dr. John P. Hagen, director of Project Vanguard, U. S. Naval Research Laboratory, delivered before the National Press Club of Washington, D. C., a report on America's satellite program. He explained the background of Project Vanguard, told how Vanguard worked, what had been accomplished, and what was anticipated for the future. Here are some of the highlights of that report.

A COMMITTEE OF SCIENTISTS and engineers appointed by the Defense Department to study the problems of launching a satellite into an orbit and to consider the handful of proposals from the Army, Navy and Air Force for doing this, selected the proposal of the Navy, and for this approach, coined the name VANGUARD.

The Navy proposal was to use rockets developed for use in the earlier upper air research program. These rockets needed modification to make them suitable for the satellite-launching job, but were rockets of demonstrated capability. The first-stage rocket was based on the Navy *Viking* research rocket, the second stage stemmed from the *Aerobee,* the third stage, however, was a newly designed solid-propellant rocket.

The planned program for Project Vanguard called for the launching of a scientific satellite in an orbit around the earth during the course of the International Geophysical Year. The satellite launching attempts were to be preceded by a test-launching program in which the various stages of the vehicle would be flight tested. This test program culminates in a three-stage test vehicle which differs from the launching vehicle only in detail. This type of program was necessary since the rocketry employed in Vanguard is separate and distinct from our ballistic missile rocketry and therefore had to be developed and tested within the program.

AFTER AN EARLY SUCCESSFUL flight test of the third-stage rocket, a change was made in our test program to make the payload in the three-stage test vehicle a six-inch sphere equipped with radio transmitters. If any one of these test vehicles goes through all its tests in a completely satisfactory manner, the six-inch sphere can go into an orbit.

Earth satellites can be best used to do three kinds of experiments:

- One can ask the satellite what is going on in its vicinity. To do this, sensing units are placed in the satellite to measure such things as temperature, pressure, meteor impact.
- The orbit is carefully observed and from the changes in the orbit, occasioned by the drag of the residual atmosphere and by the attraction of the equatorial bulge on the earth, the density of the upper atmsophere and certain deductions concerning the shape and the size of the earth can be made.
- Scientific apparatus is installed in the satellite and uses the satellite as a space platform. This apparatus is designed to measure and observe astronomical things, such as radiation in the ultraviolet range from the sun. The apparatus might be designed also to measure meteorological things in the atmosphere, such as the extent of cloud cover around the equatorial belt of the earth from which can be deduced the energy balance of the atmosphere, and fundamental knowledge concerning the make-up of the world's weather can be derived.

Another type of experiment is one in which the primary cosmic rays are observed and analyzed. A fourth kind of experiment is one in which the magnetic field of the earth and electric currents found in the ionosphere are measured.

ALL OF THESE EXPERIMENTS are ideally suited to a satellite in that they involve measuring things outside of the absorbing atmosphere of the earth—things that cannot be measured here on the surface of the earth—the measurement of which will expand our knowledge of the universe in which we live.

The program for constructing and instrumenting the satellites progressed well. The experiments were chosen by the committee of the National Academy of Sciences and prepared in various laboratories. The satellites were designed and assembled at Naval Research Lab.

The first of the satellites—designed to measure the ultraviolet radiation from the sun and to make environmental measurements of our outer atmosphere—has been completed and has gone through a series of rigorous tests to insure its satisfactory operation. These tests have culminated in one where the satellite, fully operating, has been held in a vacuum under controlled temperature condition for 15 days and has continued to operate well. This is ready for flight. The second version is nearly completed, with the third and fourth following in good order.

The six-inch sphere for use with the test vehicles has been completed and is ready for installation. This package contains two tracking transmitters, one of which operates from solar cells. The transmitters are so arranged that environmental measurements such as temperature can be made and reported back.

RADIO TRACKING of satellites is done at 108 mc. To effect this an array of tracking stations has been set up extending from Washington, D. C., to Santiago, Chile. This array is designated to intercept satellite passage each time round and to measure its position accurately. There are additional stations at Antigua, BWI, for aid in launching and early detection, in San Diego, Calif., and in Australia.

Associated with the tracking system is a computing center equipped with high speed computers to make possible the rapid calculation of the orbits and the accurate prediction of the future courses of the satellites. The tracking and computation system is now in operation with all stations on the air.

A satellite can be seen visually only at twilight when it is in full sunlight, and you are just beginning to enter darkness. Earlier during the daytime a satellite cannot be seen because it is a dim object, and it is not visible against the scattered sunlight in the daylight sky. At night, when the sky is clear and stars can be seen, a satellite is not visible because it too is in darkness and therefore cannot shine in reflected sunlight.

THERE IS ONE OTHER WAY a satellite might be tracked and that is by radar. Once the radar experts know with certainty in which direction to point their antennas, they will detect the satellite and measure its distance from the radar installation.

It is of great importance for us to get an early and a good measure of the orbit of any satellite appearing in the sky. It is of importante to all of us to have information concerning the atmospheric density; the geodetic information concerning the shape of the earth is available to anyone who is capable of measuring the orbit with accuracy and then interpreting the results.

DR. JOHN P. HAGEN holds a scale model of the Vanguard. A replica of the satellite is in the foreground.

Underwater Satellite

Vanguard has been primarily designed for scientific purposes—to enable the whole world to learn more about outer space. However, RADM H. G. Rickover, USN, *Assistant Chief for Nuclear Propulsion, Bureau of Ships, has suggested another type of "satellite"—the underwater satellite. Here are excerpts from an address he made before an American Legion committee in Atlantic City, N. J., recently.*

TODAY OUR NAVY is in the midst of change—conversion from oil to nuclear power. This change is taking place so rapidly that it is, in truth, a revolution.

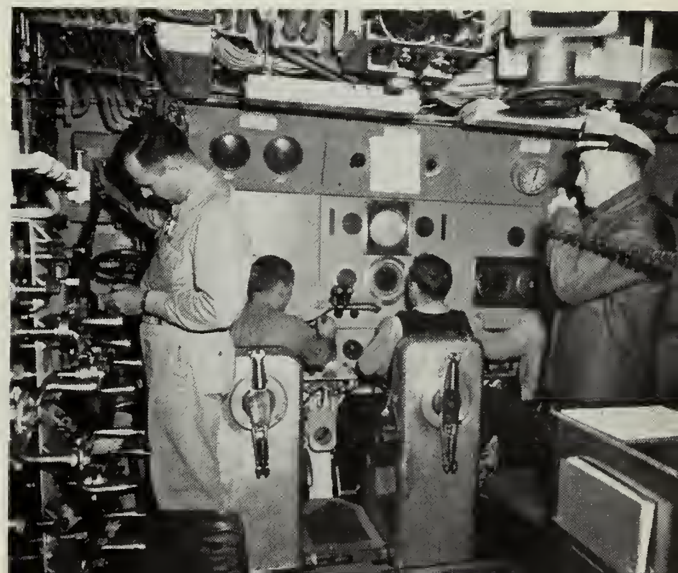
Let me give you a brief timetable. The idea of an atomic submarine was conceived in 1949. Four and one-half years later the land-based prototype of the propulsion plant for this submarine was operating, and a few months later *Nautilus* was at sea.

Seawolf, the second nuclear submarine, was launched in 1955; the third one, *Skate,* last spring; the fourth one, *Swordfish,* was launched in August; and the fifth, *Sargo,* [was launched recently.] Altogether, 14 additional nuclear submarines are now under construction or authorized. Further, we are designing or constructing nuclear power plants for a guided missile cruiser, an aircraft carrier, and a frigate.

By the mid-1960s we should have in being the first nuclear task force—complete from submarines to carriers. Thus, a technological and military revolution, which in the past would have taken the better part of a century, will be completed in a decade.

WHAT NUCLEAR POWER can do for the submarine has already been demonstrated. For the surface ship it will provide virtually unlimited cruising radius. Our aim is to design nuclear propulsion plants which can last for an entire war without being refueled. The nuclear task force will not have to return to shore bases

CREW MEMBERS at diving stations on board *USS Nautilus* (SSN 571), the world's first nuclear-powered sub.



SATELLITE UNDERWATER—*USS Nautilus* represents prototype of what RADM Rickover calls 'ideal mobile platform.'

for more oil, or require an endless chain of tankers. All the replacement fuel needed for the nuclear-powered Navy of the future can be stored in a few large buildings. It is not radioactive and does not deteriorate.

In surface ships, nuclear power multiplies the distance an aircraft carrier can travel at full speed without refueling about 20 times, and the distance a frigate can travel at full speed without refueling about 50 times.

WE ARE ALSO DESIGNING a nuclear power plant for another type of ship which will be very important for antisubmarine warfare, a frigate. We hope to be able to start construction of this frigate in the near future. It will be needed to protect our naval task forces against submarine attack.

The nuclear task force will be unlike its closely knit counterpart of World War II. In order to reduce vulnerability to hydrogen-bomb attack, the nuclear task force will be dispersed over an area as big as the State of New York. No ship will be within H-bomb radius of another.

* * *

THE NUCLEAR-POWERED task force built around the atomic carrier will give the Navy unprecedented mobility and striking power.

The other two services have been developing land-based 1500-mile ballistic missiles. These will be able to travel at high speeds, making effective interception difficult.

The nuclear-propelled submarine capable of launching intermediate-range ballistic missiles with nuclear warheads could make our Navy an even more effective deterrent force.

There is no reason why intermediate-range ballistic missiles cannot be launched from floating platforms, surfaced or submerged. The Navy is, in fact, now developing such a missile, the *Polaris.*

Armed with this missile, the nuclear-powered submarine will become an underwater satellite. It will be large enough to store, maintain, and fire intermediate-range ballistic missiles, and it will be able to move anywhere at any time, completely submerged.

These underwater satellites will launch their attack from far out in the Atlantic, the Pacific, or the Arctic Ocean. They could be placed anywhere within 1500 miles of their targets. *They could be dispersed over literally millions of square miles of ocean.*

The problem of locating and destroying such an underseas Fleet will be tremendous. Search radar will be helpless against it. The enemy would be in the position of a man trying to find a black cat on a vast and empty plain on a moonless and starless night.

The underwater satellite marks the closest approach now foreseeable to the ideal mobile platform. It could go anywhere at any time. It could remain well hidden from the enemy. It would draw the enemy's missiles and bombs away from our cities and factories and farms, and draw them toward the uninhabited seas.

THE MERE EXISTENCE of this underseas Fleet would create a tremendous military and economic problem for a potential aggressor. He might calculate that so many of his missiles launched in a surprise attack could destroy our land-based counterforce before we could effectively retaliate.

But he could not make a rational calculation for an attack against our hidden and mobile underwater satellites. Many enemy missiles might be needed to destroy just one of these submerged launching platforms.

I should make it plain that this weapon cannot be built by the day after tomorrow. It will be a scientific and engineering challenge, comparable in difficulty and magnitude to the first nuclear submarine.

In other words, *Nautilus* did not mark the end of a technological road. It marked the beginning. It should be compared with the first airplane that flew at Kitty Hawk.

For every problem we have solved in the short history of nuclear power, a hundred remain to be solved.

LIKE CLOCKWORK—Instruments like this one gather and broadcast scientific data while traveling in satellite.

Research Report

As Chief of Naval Research, RADM Rawson Bennett, USN, *is well qualified to speak of the work the Navy has done, is doing, and plans to do in the fields of research which may ultimately affect the lives, not only of every Navyman, but of every citizen of the United States. This is what he had to say to members of the National Security Industrial Association at Washington, D. C.*

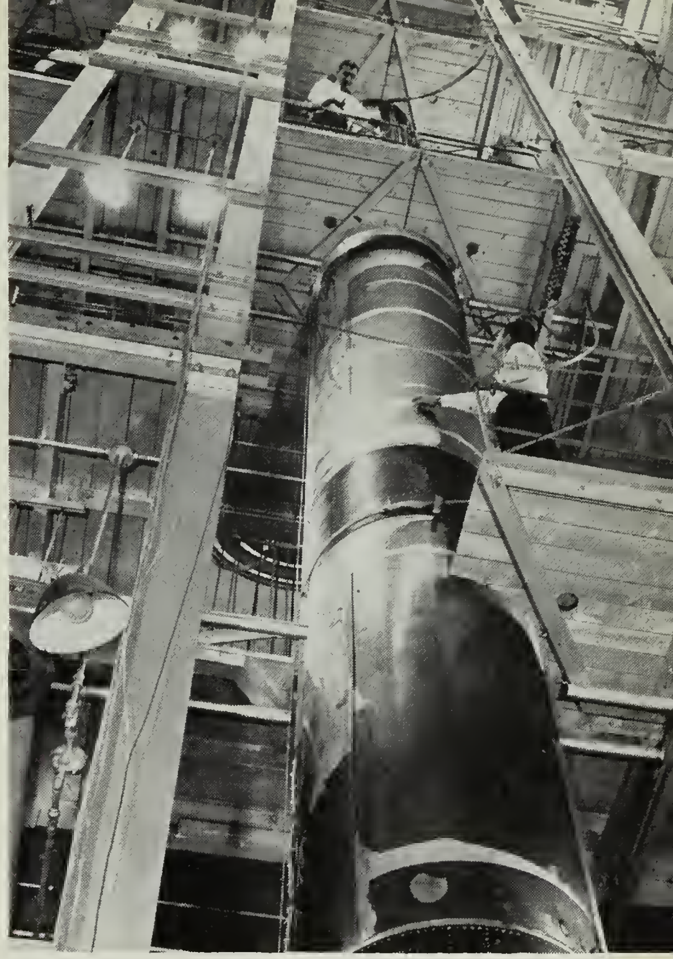
ONLY A FEW DECADES AGO the world of science was one almost completely incomprehensible to the general public. It is true that there was some talk about ships that might some day sail around the world on a cupful of nuclear fuel or about rocket flights into space, but such achievements seemed too far in the dim future to merit serious interest.

Contrast that picture with the situation today when the advances of science are on everybody's lips. The press, the magazines, and television are constantly keeping an avidly interested public up-to-date on the latest exploits of science. Our dazzling array of new military weapons designed for the future have taken hold of man's imagination. He is quite familiar, for example, with the Navy's revolutionary submarine, *Nautilus,* our top performance interceptor the F8U *Crusader,* and such missiles as *Terrier.* A high school boy could give you a detailed run-down on the earth satellite project that would make your head spin.

I must admit that underlying this enthusiastic interest in our future is some trepidation that a nuclear war might blast it all away. On the other hand, it is the series of successful break-throughs by the scientist and his partner, the engineer, coupled with the mighty production capability of industry that has provided us with weapons we believe can forestall or prevent such a dire eventuality.

This constant focus on the future is new to us. It has been brought about by the rapid rise of the new field of research and development, which in little more than a decade has come to play a major role in our economy.

Without question, it has been basic research that in the brief span of years since the end of World War II has made possible the new Navy we are now building—a Navy utilizing fantastic forces that a decade ago we barely knew existed.

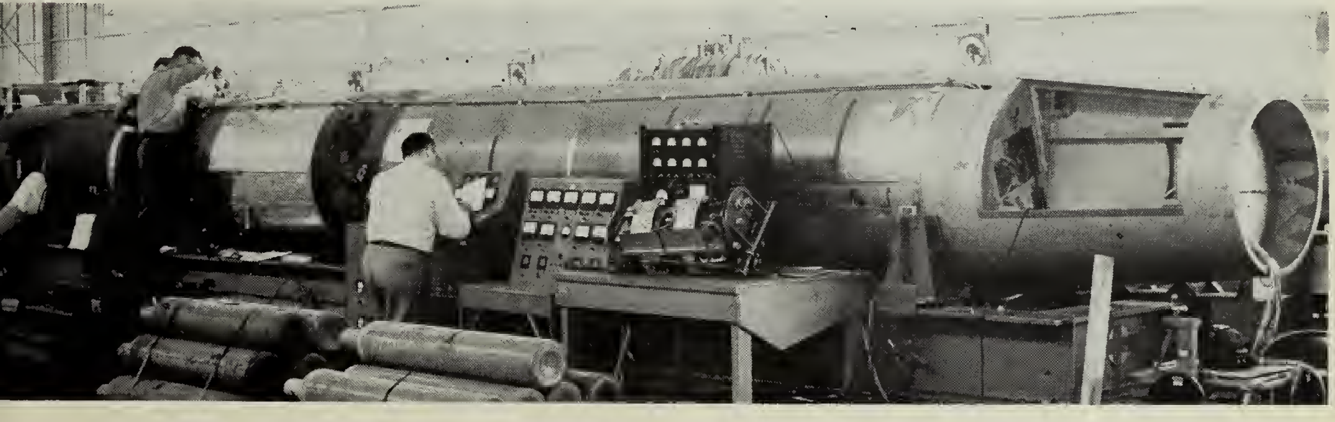


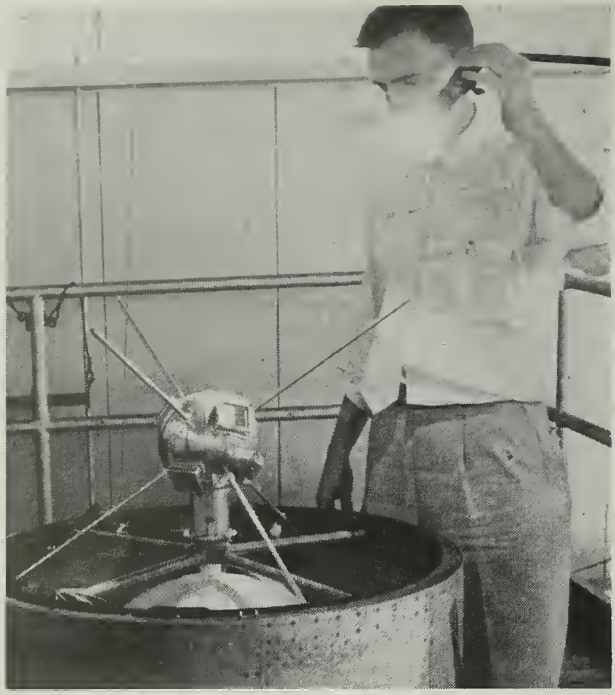
VERTICAL INSPECTION—Two engineers give Vanguard rocket a thorough going-over as it stands in its test tower.

Three-Dimensional Service

The sole object of all naval research is to insure that our Navy is, and will continue to be, the most powerful and advanced Navy in the world. The Navy is the only three-dimensional service, involving operations not only on the sea but in the depths beneath, the air above, and the land bordering the sea. This means that the Navy must concern itself with virtually every scientific development in every environment through all the domains of

HORIZONTAL TEST—Before a research project ever sees the light of day, hundreds of tests have to be performed every step of the way. Here, manufacturing personnel test the first stage of the Vanguard satellite launching vehicle.





TEST OF experimental satellite solar batteries is carried out by scientists during the final stages.

science between the poles of the earth and out into outer space. It is only logical that the Navy's basic research program administered by the Office of Naval Research runs the entire gamut of the scientific field from astronomy to zoology.

Contributions to the Future

Navy research, as it digs for knowledge that will provide us with more efficient and advanced military weapons and equipment, frequently benefits all of science and makes a major contribution to mankind's future.

Information gained from Navy-sponsored studies of celestial bodies and other phenomena in space has immediate application to such areas as *communications, navigation, high-altitude flight,* and *weather forecasting,* which have application both to military technology and civilian life.

Going beyond these mundane applications, recent work in this field has resulted in what may be a significant breakthrough in extending our knowledge of the systems of nebulae outside our own galaxy. For example, it has become apparent that a close relationship exists between the forms and constitution of the great majority of galaxies. The result of further investigation may well influence the theory of the *origin of the universe.*

Radio Astronomy

The Navy has been a pioneer in the new field of *radio astronomy* based on the discovery that planets and stars send out radio signals as well as light waves. Since 1946, radio astronomers at the Naval Research Laboratory, using the huge 50-foot radio telescope there, have been engaged in a continuing research program. They have picked up radio signals from the sun, Mars, Jupiter and Venus, which among other things have given us a better idea of the temperatures of these planets. Research through radio astronomy also supplies a great deal of information about the propagation of electromagnetic radiation through space, and through the ionosphere and troposphere, and thereby contributes to the development of various types of *electronic equipment.*

Field of Communications

Basic research in electromagnetic propagation has been directly responsible for the remarkable progress we have been making in the field of communications. Just in the past year Navy research projects have studied intensively the propagation of a very low frequency radio signal by mechanisms which we have only recently learned to understand.

One of these involves sending a signal from one point on the surface of the earth to another point along a path which travels many miles into space. This mechanism may also tell us something about the materials that are present a few thousand miles out into space.

We are expending considerable effort on the study of communication by means of signals that are reflected or scattered from the ion trails put out by meteors entering the earth's atmosphere. We expect that this may eventually result in vastly improved medium-range communications.

Radio Relay Station MOON

One of the most significant achievements in the field of radio communications is the discovery by Navy scientists that the moon can be used as a radio relay station. The Naval Research Laboratory recently reached this conclusion after six years of experiments involving the bouncing of radar signals off the moon. Research was begun in 1951 as part of a long-range research project to study the moon by radar, which would benefit both radio communications and radio astronomy.

Research Leading to Transistors

Basic research also supplies the fundamental information necessary to evolve new types of components for electronic uses. For example, a Navy-sponsored research study on the properties of semi-conductors has supplied much of the basic information that has made possible the development of *diffusion transistors* which can be mass-produced. In addition, they have the capability of operating at much higher frequencies than the older types of transistors. This break-through in the transistor art not only assures that reliable units can be produced at relatively low cost but also permits the utilization of transistors in a new class of applications.

In the area of materials, research developed silicon and germanium as a substitute for rare selenium and actually gave us devices superior to those made from selenium.

Building Blocks of the Universe

Another program in which the Navy is greatly interested is the study of *elementary particles,* which may be considered the basic building blocks of the universe. By observing the production and interaction of these elementary particles we can gain important clues to the prime motivating force of life.

The answers we learn will give man a greater mastery of his environment than was ever thought possible. However, the accomplishment of this goal requires the use of high-energy particle accelerators to provide the large amounts of energy needed to induce the interaction of these particles. We are seriously concerned because the United States has only two accelerators capable of efficient production of these particles, and these two cannot meet the demands of the situation.

High Temperature Alloys

In the field of high-temperature materials, research supported by the Navy, is effecting continuing improvements in *molybdenum-base alloys.* New molybdenum alloys have been developed which have strengthened properties more than three times those of presently used high-temperature alloys. It now appears that certain molybdenum alloys may be useful at temperatures as high as 2500°F, and for some short time applications above 3000°F. There is obviously considerable interest in the use of these alloys for missile and jet engine components.

Upper Atmosphere Research

Another Navy program helping to bring us closer to the wonderful world of the future is upper atmosphere research. If our aircraft are to navigate at heights approaching 100,000 feet at speeds of *Mach 5* or more, we must have more accurate information about air density, pressures, and temperatures as well as cosmic radiation at those heights. At the same time, if we are to accomplish any considerable improvement in radio and television communications, navigation, and long-range weather forecasting, we must know a great deal more about the ionosphere, which exists at levels of between 40 and 400 miles above the earth.

Since 1946, the Navy has pioneered in the development and use of both *rockets* and *high-altitude plastic balloons* as major research tools in this field. One Navy-developed rocket, the *Aerobee-Hi,* went to 193 miles during the past year, a record for single-stage research rockets. This rocket is now playing a prominent part in the upper atmosphere research program of the International Geophysical Year.

Our plastic balloon program supplements rocket research since balloons can remain in the upper air for several hours, a rocket only for a few minutes. Unmanned balloons in the Navy's *Skyhook* project have reached heights of about 25 miles, while manned balloons in our Stratolab project are capable of carrying observers with their scientific instruments to altitudes of over 100,000 feet. The development of these plastic balloons through the long-term research programs of the Navy paved the way for the recent record-breaking manned balloon flights of the Air Force. Navy research also initiated the method of launching a rocket from a balloon. The Navy *Rockoon,* which is a small *Deacon* rocket launched from a *Skyhook* balloon, is providing an inexpensive means of investigating the upper reaches of our atmosphere for the IGY.

Project Stratoscope

The newest Navy balloon project was completed just a few weeks ago. This was *Project Stratoscope,* in which a telescope was carried to 81,000 feet and took the first clear, sharp pictures of the sun. This has been a long sought goal for astronomers, whose observatory photographs are obscured by the haze and dust of the atmosphere. For the first time we can hope to gain a real understanding of the sun's effect on the earth. Again as a by-product of our research for the development of these high-altitude plastic balloons, we have the *polyethylene film* in which a variety of items are packaged at the local supermarket.

The Earth Satellite

The Navy's long and successful upper atmosphere research program with rockets and balloons was a factor in the selection of the Navy to do *Project Vanguard,* the earth satellite vehicle.

There is no connection between Vanguard and any missile project whatsoever. It is entirely separate—with its own scientific team, its own contractors and engines.

It is an economically run project, one in which cost has been carefully considered. Within the planned project, funding has not caused a delay.

The only time schedule to which we have been committed was to make the satellite attempt within the International Geophysical Year.

The U. S. satellite program is progressing according to plan.

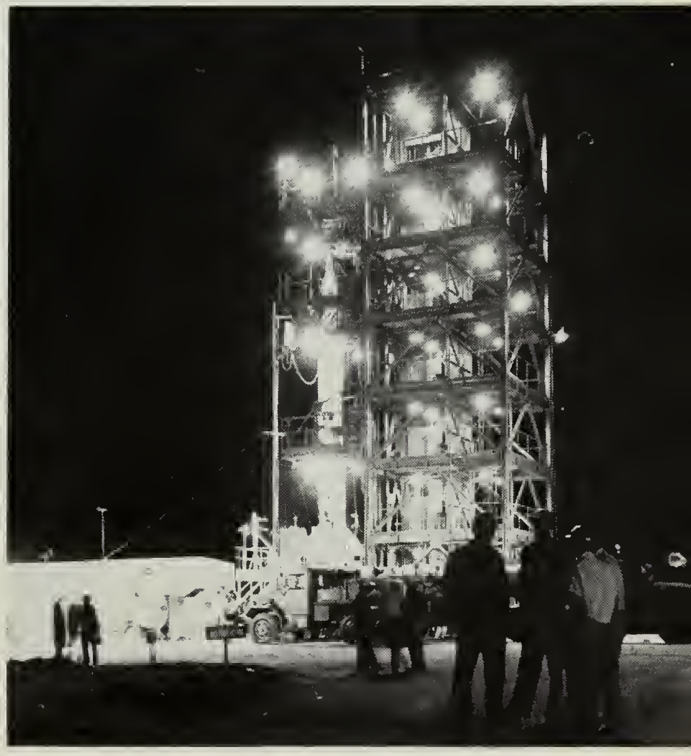
Our distant goal is, of course, manned rocket flight in space, but there are many unknowns that must be solved before we can even seriously consider such travel. We must determine the effects of cosmic and solar radiation on humans, and we are only now beginning to study their effects on living cells. Another risk difficult to assess at the present time is the probability of meteor collisions. Although this hazard has been estimated and various schemes proposed for eliminating, we have not yet reached the point where we can test any of them.

These and other serious obstacles, existing in every area connected with space flight, can only be overcome by an unremitting, relentless program of basic research. We have yet to understand fully the theory of combustion in a rocket motor. We need more research on fuels for our rockets and on high-temperature metals and ceramics.

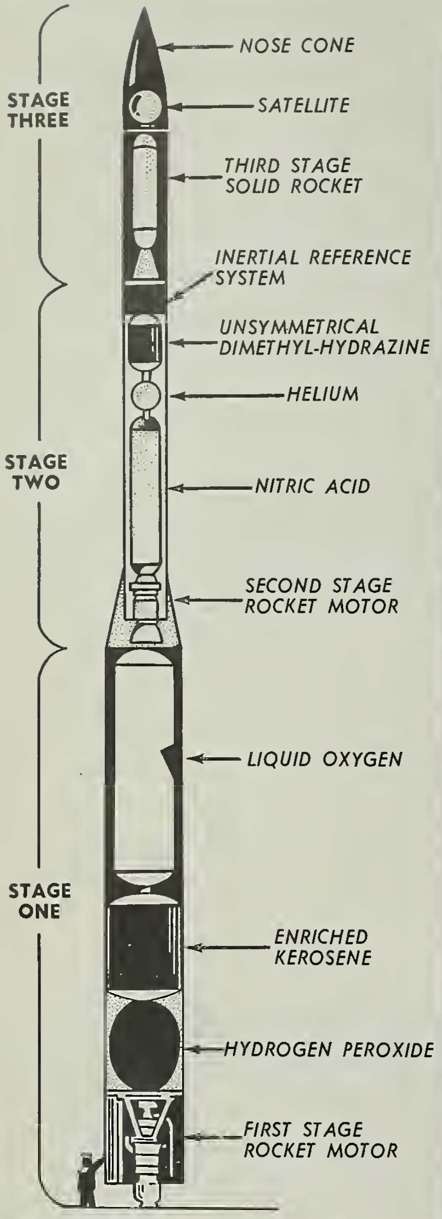
Once research shows us that radical new propulsion systems are feasible, we can advance them into the practical realm. Right now rockets and satellites are our best laboratories for space flight research. They are undoubtedly the predecessors of future space ships, but they are the remote, not immediate ancestors.

What I have described is a program of military-financed research largely carried on at academic and other non-profit institutions. The Navy has been doing this since 1945. The results, I think, speak for themselves.

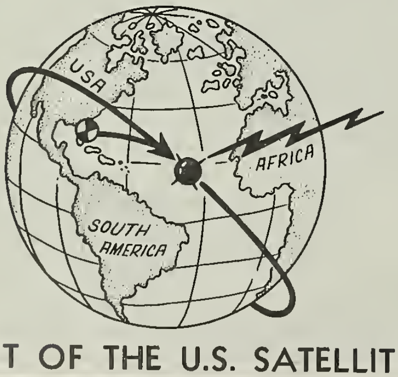
POISED FOR FLIGHT—Scientists and engineers make last-minute adjustments just before launching of test vehicle.



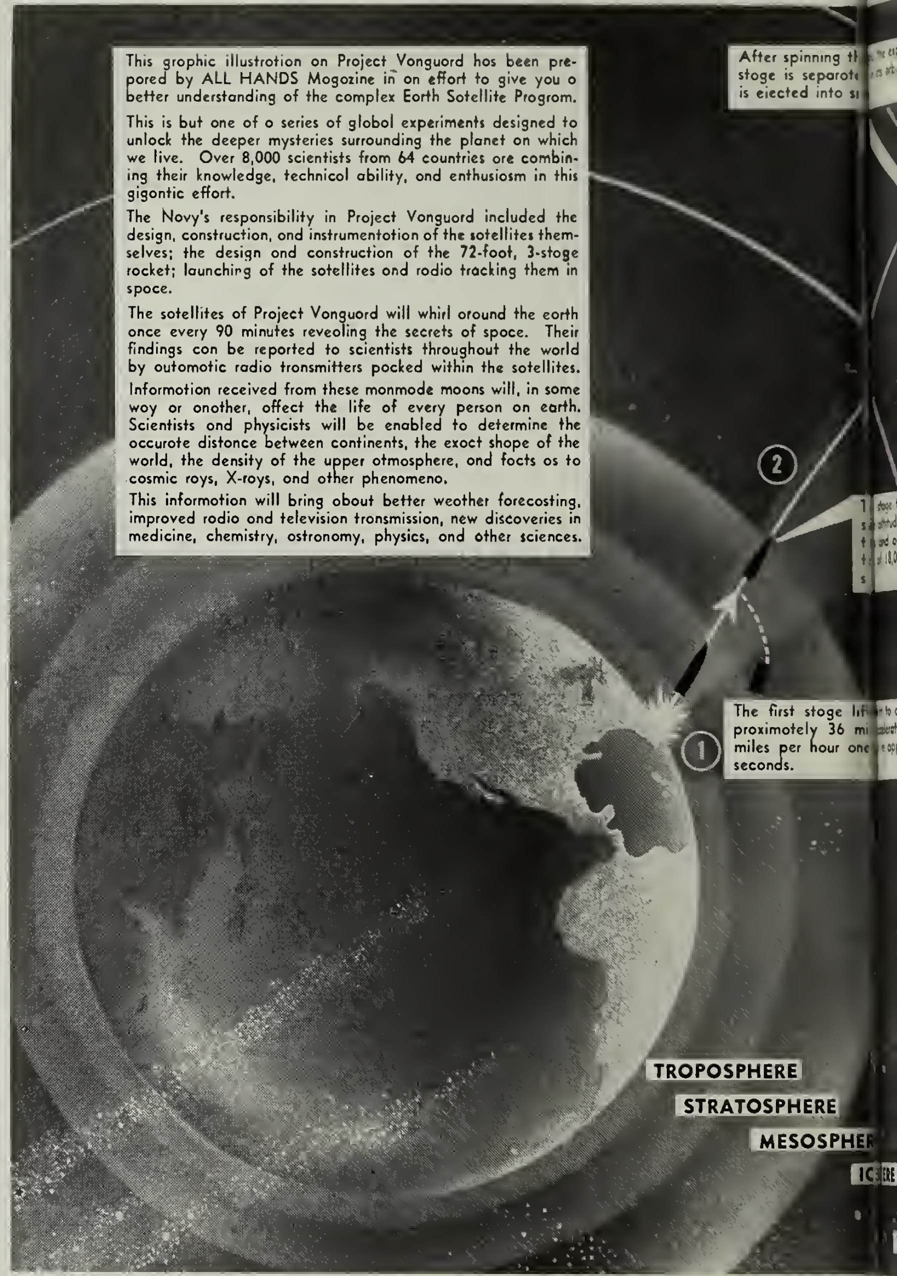
PROJECT VANGUARD—A EXP



The Vanguard rocket which carries the 21½-pound satellite into its orbit 300 miles above the earth is 72 feet long and weighs more than 11 tons. Its initial thrust is more than 27,000 pounds. When thrown into space, the satellite travels at a speed of 18,000 miles per hour.



ORBIT OF THE U.S. SATELLITE



This graphic illustration on Project Vanguard has been prepared by ALL HANDS Magazine in an effort to give you a better understanding of the complex Earth Satellite Program.

This is but one of a series of global experiments designed to unlock the deeper mysteries surrounding the planet on which we live. Over 8,000 scientists from 64 countries are combining their knowledge, technical ability, and enthusiasm in this gigantic effort.

The Navy's responsibility in Project Vanguard included the design, construction, and instrumentation of the satellites themselves; the design and construction of the 72-foot, 3-stage rocket; launching of the satellites and radio tracking them in space.

The satellites of Project Vanguard will whirl around the earth once every 90 minutes revealing the secrets of space. Their findings can be reported to scientists throughout the world by automatic radio transmitters packed within the satellites.

Information received from these manmade moons will, in some way or another, affect the life of every person on earth. Scientists and physicists will be enabled to determine the accurate distance between continents, the exact shape of the world, the density of the upper atmosphere, and facts as to cosmic rays, X-rays, and other phenomena.

This information will bring about better weather forecasting, improved radio and television transmission, new discoveries in medicine, chemistry, astronomy, physics, and other sciences.

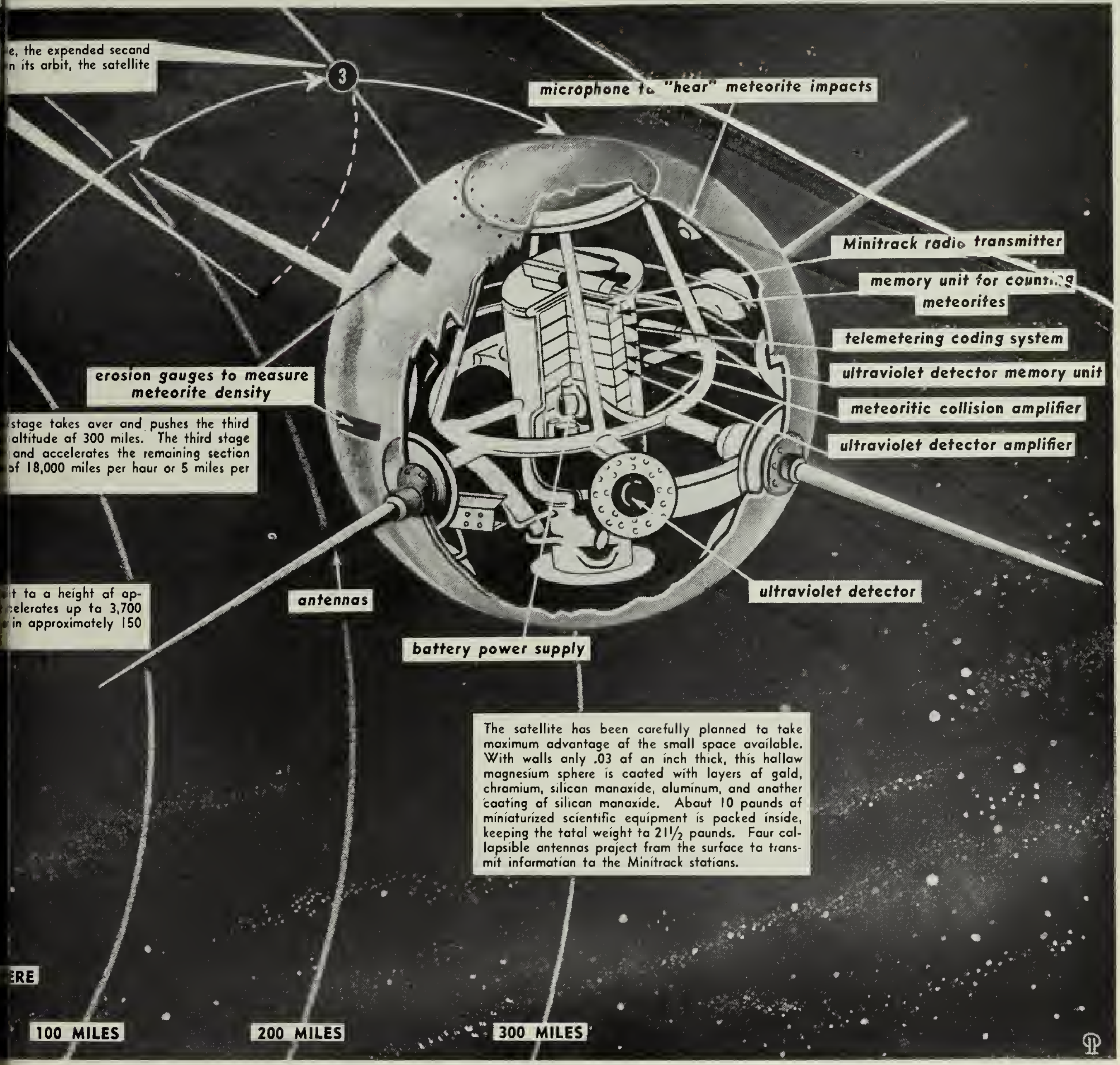
LOCATIONS OF TRACKING STATIONS

Blossom Point, Maryland
Fort Stewart, Georgia
Batista Field, Havana, Cuba
Mt. Cotopaxi, Quito, Ecuador
Ancon, Lima, Peru
Antofagasta, Chile
Santiago, Chile
Antigua, British West Indies
San Diego, California
Woomera, Australia

Signals transmitted by the satel via the Naval Research Labor Data processing systems calculate

Prepared by ALL HANDS Magazine

EXPEDITION INTO SPACE

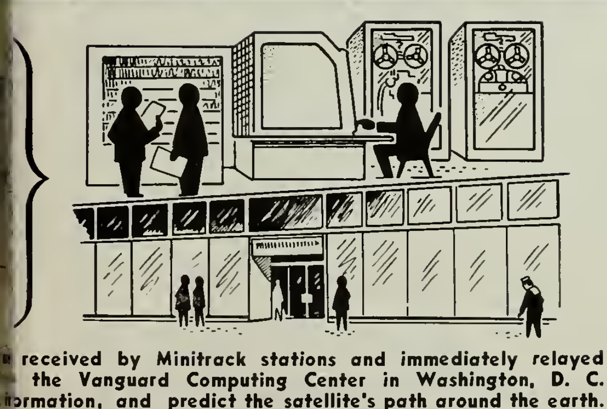

3
microphone to "hear" meteorite impacts
Minitrack radio transmitter
memory unit for counting meteorites
telemetering coding system
ultraviolet detector memory unit
meteoritic collision amplifier
ultraviolet detector amplifier
ultraviolet detector
erosion gauges to measure meteorite density
antennas
battery power supply
ERE
100 MILES
200 MILES
300 MILES

e, the expended second
n its orbit, the satellite

stage takes over and pushes the third
altitude of 300 miles. The third stage
and accelerates the remaining section
of 18,000 miles per hour or 5 miles per

t to a height of ap-
celerates up to 3,700
in approximately 150

The satellite has been carefully planned to take maximum advantage of the small space available. With walls only .03 of an inch thick, this hollow magnesium sphere is coated with layers of gold, chromium, silicon monoxide, aluminum, and another coating of silicon monoxide. About 10 pounds of miniaturized scientific equipment is packed inside, keeping the total weight to 21½ pounds. Four collapsible antennas project from the surface to transmit information to the Minitrack stations.

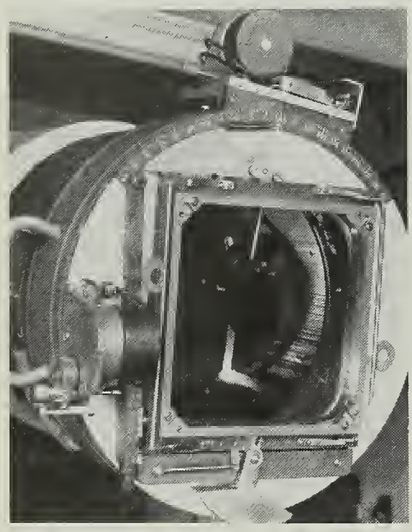


received by Minitrack stations and immediately relayed
the Vanguard Computing Center in Washington, D. C.
ormation, and predict the satellite's path around the earth.

EXPERIMENTS TO BE PERFORMED IN THE IGY SATELLITE PROGRAM INCLUDE:

- ✱ Observations of solar radiations
- ✱ Aurora particles
- ✱ Cosmic rays
- ✱ The density of the upper atmosphere
- ✱ Micrometeors and dust in space
- ✱ Geodetic parameters
- ✱ The cloud cover of the earth
- ✱ The earth's magnetic field
- ✱ The ratio of radiation influx to the atmosphere to the radiation efflux

'BEARING 325'—Moon Position Program will benefit navigators by supplying them accurate information.



Navy and IGY—

Where's the Moon?

THE EARTH SATELLITE program is the rooster's crow in the dawn of a challenging new age—an age which finds the Navy helping to explore the unknown seas of space.

Important as it is, the arrival of this dawn does not mean that all the darkness of man's ignorance has been forever dispelled. Man still has much to learn, and earth satellites are just one part of a special effort now being made by the world of science in order to learn more about many things.

The Navy has been assigned key roles in a number of the current IGY programs besides the man-made moon project. On this and the following pages you'll find brief descriptions of the five principal ones.

Longitude and Latitude

The longitude and latitude program for IGY has two phases—Astronomical Longitudes and Latitudes and the Moon Position Program. The U. S. Naval Observatory in Washington, D. C., is one of many observatories taking part in the astronomical longitude and latitude study and it is the central agency for the Moon Position Program.

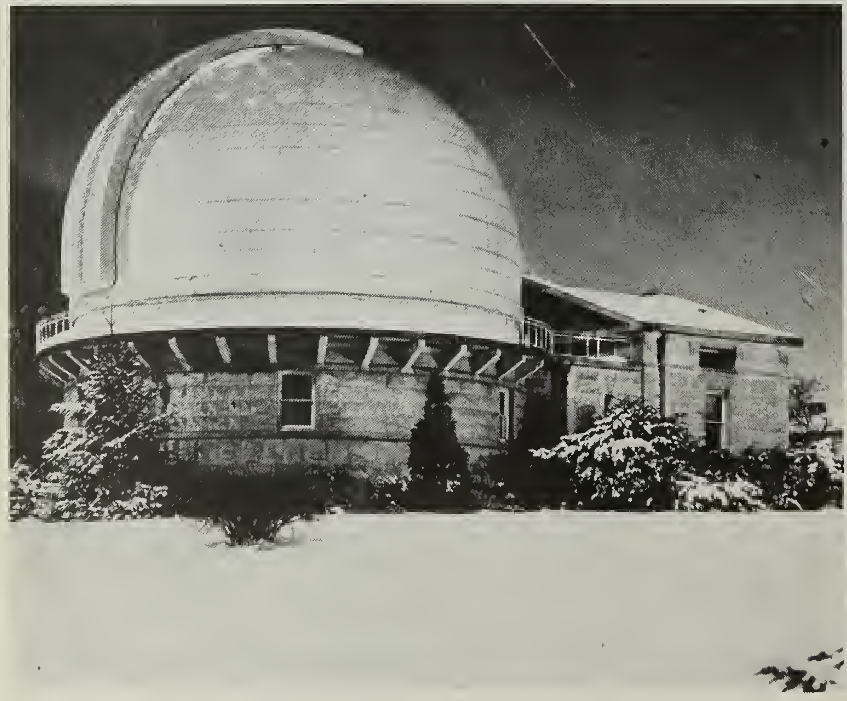
In the astronomical longitude-latitude project observatories all over the world are taking sightings to determine (within a margin of error of only a few feet) the almost exact astronomical longitude and latitude of many points on the earth. By checking the results of these sightings against those to be made in the future at the same places, it will be possible to tell whether or not the continents are shifting in relation to each other and, if they are moving, to find out how fast and in what direction.

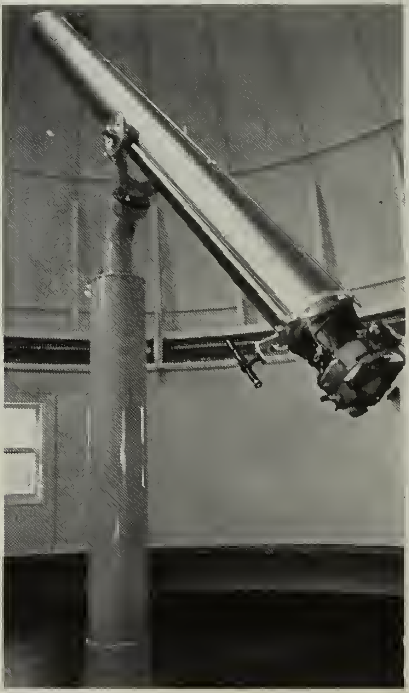
The Moon Position Program is something new in IGY. Its principal tool is the "Markowitz camera," developed by the Naval Observatory, which makes it possible to determine the position of the moon in relation to the stars quickly and accurately.

The data gathered during this intensive observation of the moon will be useful in: determining Ephemeris Time more accurately (this is uniform time); detecting irregular changes in the acceleration and speed of rotation of the earth; and measuring the size and shape of the earth.

It will also be helpful in solving a fundamental problem in physics concerning relation between gravitation and electricity; that is, whether time scales of Ephemeris Time (which is based on action of gravitation) and atomic time (which is based on electrical forces affecting the atom) are equivalent.

SCIENTIFIC IGLOO—One of Naval Observatory buildings. *Rt:* Telescope with moon camera. *Above:* Camera close-up.





What's in the Ocean?

According to one of the scientists on the panel in charge of the American IGY program for oceanography, we know less about the 70 per cent of the earth's surface which is covered by water than we know about the face of the moon. The Navy, along with such well known research centers as the Scripps Institute of Oceanography at La Jolla, Calif., and the Woods Hole (Mass.) Oceanographic Institution, hopes to remedy that situation during IGY.

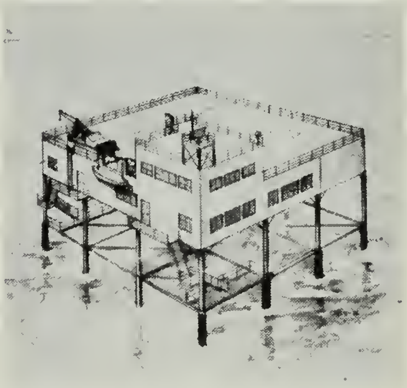
The oceanography program is divided into two major parts—the Island Observatories Project and Operation Deep Current. Information gathered in these operations will be used to answer important questions about long-range weather forecasting; the fertility of ocean life as it is affected by the exchange of water between deep ocean currents; possible dangers in using the oceans as dumping places for the waste products of radioactive substances; the shape of the deep sea floor; and the changing levels of the ocean.

Although you'd never notice it on board ship, sea level varies with the seasons. For instance, in the northern hemisphere's spring the northern parts of the ocean are about half a foot lower than they are during the rest of the year. In the southern hemisphere's spring the same is true down under. The changes seem unimportant, yet they offer a key to the circulation of water throughout the earth's oceans. This, in turn, affects climate and weather all over the globe.

Understanding these sea-level changes and their relationship to other phenomena of the ocean and the atmosphere is the main objective of the Island Observatories Project. Until now, most of the existing information on tide levels has come from tide gauge stations in the northern hemisphere. During IGY, however, about 30 additional stations are gathering this data.

Operation Deep Current, the second part of the oceanography program, involves about 70 American and foreign ships in both the Atlantic and Pacific Oceans. Scientists on board these ships are studying the deep circulation of water moving northward from Antarctica into and along the bottom of the two major oceans; the equatorial current systems in the Atlantic and Pacific Oceans; and the areas in the north central Pacific and north central Atlantic where ocean currents converge. In addition, many of the ships are measuring the ocean bottom to obtain profiles of the land beneath the sea. —Jerry Wolff

CREW MEMBERS of *USS San Pablo* (AGS 30) lower Nansen bottle used to gather sea data from way down.

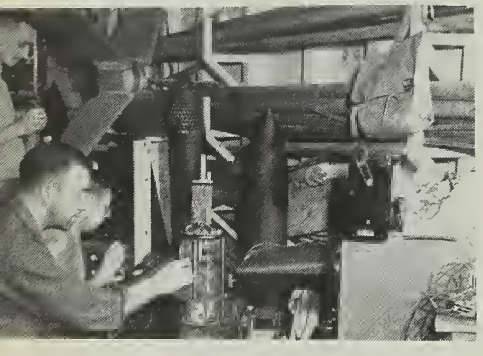


OCEANOGRAPHY program probes mysteries of the deep. *Above:* This is design for future ocean research station.

Navy and IGY—

Chasing Cosmic Rays

NAVY scientists have traveled to great heights to study cosmic rays.



FOR YEARS SCIENTISTS have been trying to learn more about cosmic rays, believed to be streams of electrically charged particles, which bombard the earth from all directions and have energies measured in millions of millions of electron volts.

The actual particles from space seldom reach the lower atmosphere, but collide with atomic nuclei in the ionosphere or stratosphere to produce showers of secondary cosmic rays composed of atomic fragments. From these fragments the properties of the primary rays can be deduced, but where the original rays come from, and how they travel to the earth, no one knows.

There is a decrease in cosmic ray intensity during some magnetic storms and a large increase, apparently related to solar flares, has been observed. There is also a world-wide variation of cosmic ray intensity with the sun-spot cycle. However, although these things are known, the reasons behind them are still a scientific puzzle.

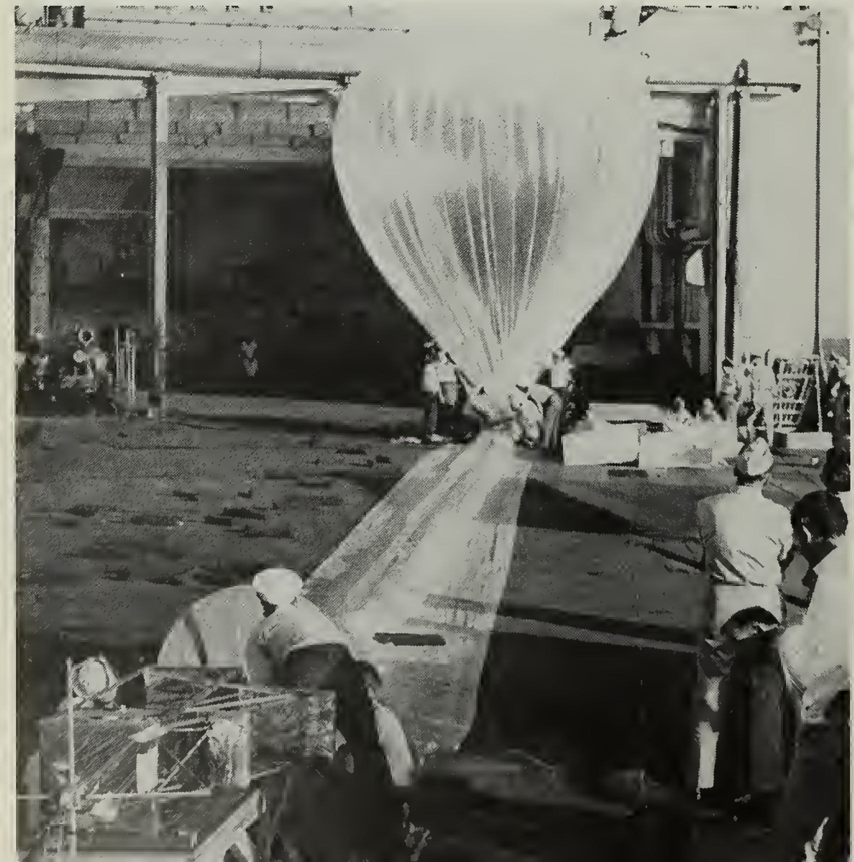
For years it was thought that cosmic rays were a form of electromagnetic radiation similar to X-rays but of much shorter wave length. However, this theory has now been discarded by most scientists as a result of experiments conducted during the last IGY (1932-33), when it was discovered that the rays were subject to deflection in the earth's magnetic field. This led to the present-day belief that the radiation consists of charged particles, rather than electromagnetic waves, since such waves are not subject to deflection by magnetic or electric fields.

Because cosmic rays change their nature as they get closer to the earth they need to be measured and identified at different altitudes. For that reason balloons and rockets have become increasingly important.

The joint program of the Office of Naval Research and the Atomic Energy Commission has pioneered cosmic ray investigations at various latitudes from the Equator to the North Pole, and the Naval Research Laboratory is among the leaders in this type of research. As part of IGY it is stepping up these investigations considerably, launching rockets, balloons and rockoons (combinations of rockets and balloons) from many parts of the earth to gather clues.

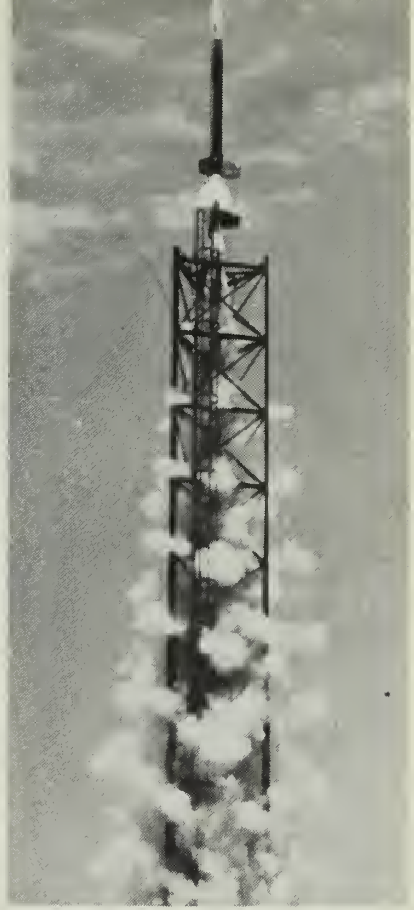
The Navy is also cooperating in the shipboard launching of balloons and rockets by scientists from various civilian research institutions.

ROCKETS and balloons are source of high-altitude cosmic ray info. *Above: Deacon* is readied near North Pole. *Below: Skyhook* is prepared for launching.



IN PERSON—Scientists use special lab to gather cosmic ray information.

Rockets for Research



GOING UP—*Aerobee-Hi* is another of the Navy's research rockets: *Below:* *Deacon* rocket about to be launched.

SINCE THE END OF WORLD WAR II rockets have become a vital research tool in many of the earth sciences. With them and the instruments they carry, man can safely explore heights so great that he may not be able to reach them in person for many years. And, through their ability to "see" from high above, rockets can also be a great help in learning more about the earth.

During IGY, rockets are being used for research work in six of IGY's 11 scientific disciplines. Because rockets are so important and, because they involve special facilities, techniques and operational problems, they have been made a separate part of the American IGY effort.

The Navy has been given a key role in the rocket program, and before IGY is over it will have figured in well over 100 launchings. The rockets fired in these experiments will be the:

Aerobee, a simple, reliable and relatively inexpensive rocket capable of reaching altitudes of over 100 miles.

Aerobee-Hi, which has reached an altitude of 180 miles and is the largest rocket to be used by the United States in the upper atmosphere research program of IGY.

Nike-Deacon, a two-stage combination which can be used for reaching heights of about 70 miles.

Deacon, which can be fired from *Skyhook* balloons to altitudes of more than 60 miles.

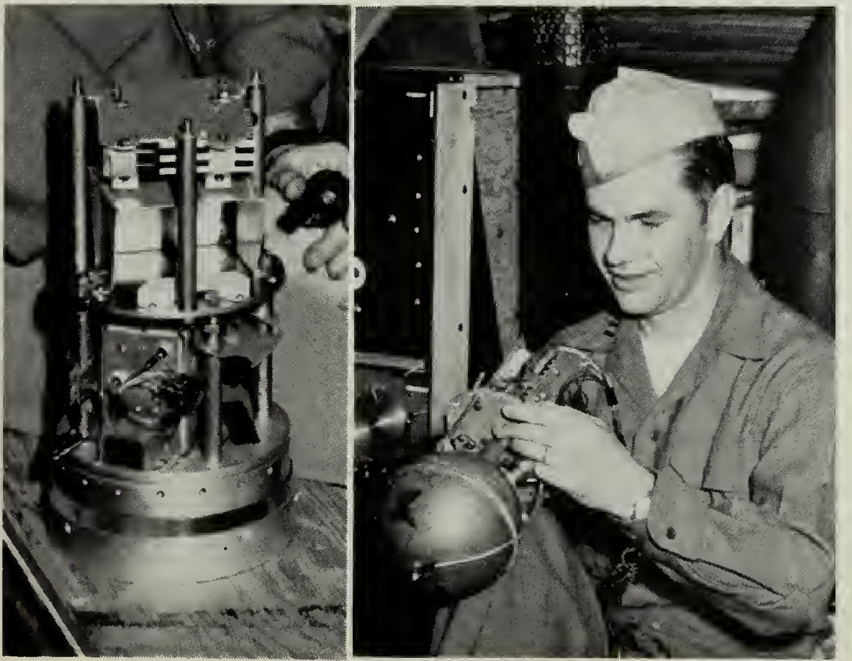
Hawk, another balloon-launched rocket, which can be used in the 70- to 80-mile attitude range.

These rockets are being used to gather data on such things as air pressure and density, temperature and winds in the upper atmosphere; the chemical and ion composition of the air at various altitudes; auroral particles; and cosmic, ultra-violet and X-rays.

In some fields rockets could find the solutions to problems which have been bothering the experts for years. For example, the character of solar radiation at the bottom of the atmosphere is known to be considerably affected by the absorption of high-energy photons (units of visible light) in the exosphere, ionosphere and ozone layer. Ground-based measurements cannot indicate which of the sun's radiations are responsible for producing these different layers. Speculation on such subjects as the relation between solar flare radiations and sudden ionospheric disturbances fill many volumes. Yet, just one rocket flight could provide the answers that would replace this speculation with fact.

—Jerry Wolff

HIGH FLYING LABS—Research rockets will carry many complicated instruments aloft during IGY. Here is a sample of *Deacon's* information collectors.



SNOW BIRD—Copter takes off from *USS Atka*. Note science buildings of Cape Adare Station in background.

Navy and IGY—

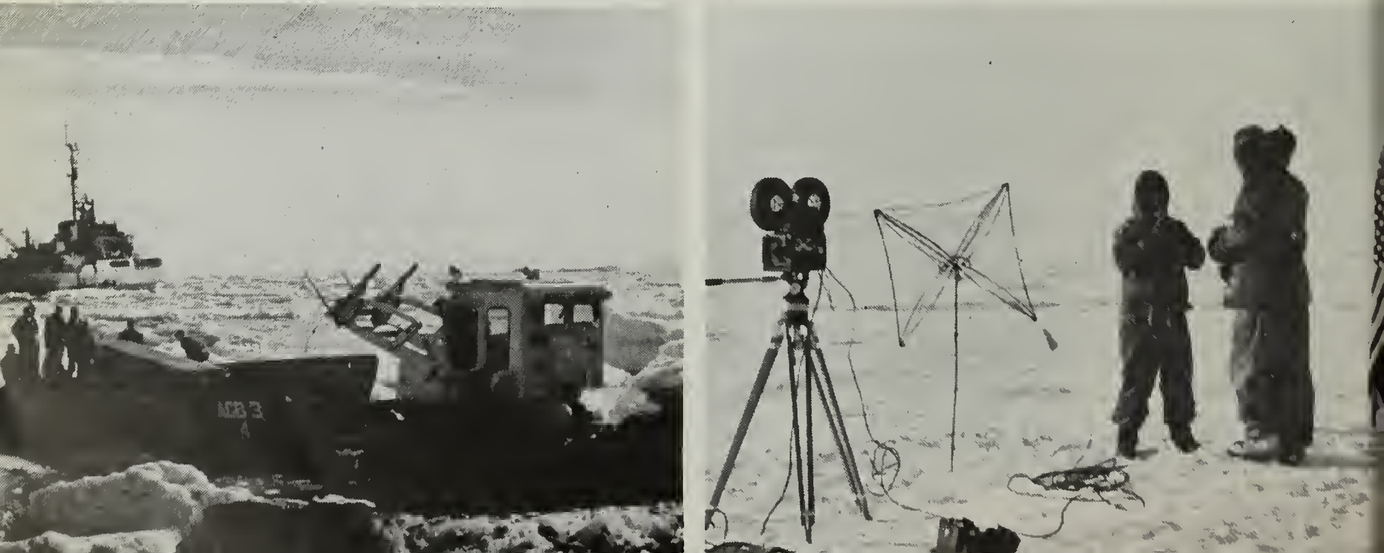
Deep Freeze III – In High Gear

THE NAVY'S BIGGEST assignment in the Antarctic phase of IGY is "Operation Deep Freeze," the monumental task of setting up and supporting seven American scientific outposts at the bottom of the world.

The preliminary work for it got under way back in December 1954, when USS *Atka* (AGB 3) set out to reconnoiter possible sites for the bases that were to be established in Deep Freeze I, which lasted from October 1955 to March 1956. During Deep Freeze I, two self-sustaining bases were established on the Antarctic coast—one on McMurdo Sound, where an air operations facility was set up to serve as the staging area for the establishment of an IGY station at the South Pole, and the other at Little America V on Kainan Bay, which was to be headquarters for the American IGY effort in Antarctica. Men and equipment were left at these bases through the Antarctic winter so that the work of Deep Freeze II could get off to an early start the next year.

Men, ships and planes for Deep Freeze II began arriving in the Antarctic in October 1956. The main objectives for this phase of Deep Freeze were to resupply and expand the Little America V and McMurdo Sound bases and to set up five new scientific stations — Amundsen-Scott IGY Station at the Pole itself, Byrd Station in Marie Byrd Land, Adare Station on Cape Hallett, Wilkes Station on the Knox Coast and Ellsworth Station on the Filchner ice shelf. The job was completed in

SUPPLIES for a long winter are delivered at Cape Adare. *Right:* RADM DUFEK and CAPT Hawkes at South Pole.



March 1957, and Navymen and scientists were left at each of the sites to spend a long, lonely winter in the world's coldest climate.

Deep Freeze III is now in full swing. During this phase of the operation, which started in August. the seven American outposts are being resupplied, worn-out equipment is being replaced, additional buildings are being erected and the wintering-over parties left by Deep Freeze II are being relieved by other Navymen and scientists. The fourth and final phase of Deep Freeze will be completed early in 1959.

Deep Freeze is part of a good-sized invasion. More than 1800 men were involved in its first phase, over 3500 participated in the second and better than 4000 are now engaged in the third.

All this effort is aimed at helping to provide the answers to questions like these:

How does Antarctica's weather affect that in the rest of the world?

What relation is there between geomagnetic disturbances in the Northern and Southern Hemispheres?

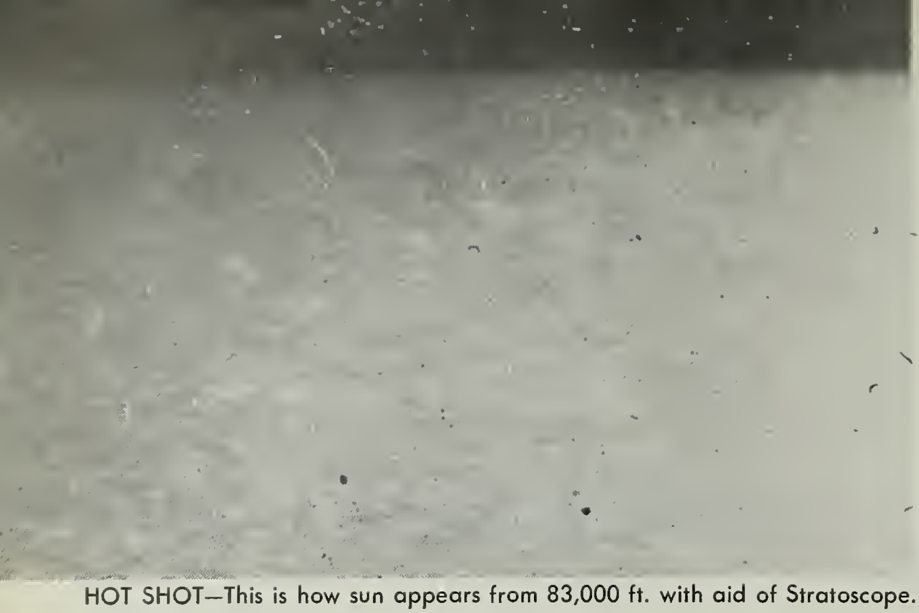
What causes the increase of noise level on high-frequency radio circuits during displays of the Northern and Southern Lights (aurora borealis and aurora australis)?

Is Antarctica a true continent, or only a group of islands overlaid by an immense sheet of ice?

While the answers to these and many other questions are being sought at the bottom of the world, the word, "unexplored," will be disappearing from many places on the maps of that vast wasteland known as Antarctica. —Jerry Wolff

BIG PUSH—Icebreaker clears path through ice for replenishing ships: *Below:* Flags of three IGY participating countries are raised at McMurdo Sound.

WATCH ON THE BRINE—*USS Atka* aids icebound ship. *Rt:* Navy party plants cylinder at Gen. Erskine Bay.



HOT SHOT—This is how sun appears from 83,000 ft. with aid of Stratoscope.

Project Stratoscope: Unlocking Mysterie

PROJECT STRATOSCOPE, aimed at furthering man's knowledge of the sun and other celestial bodies, has taken its place alongside the Skyhook and Stratolab programs in the Navy's upper atmosphere studies.

In this new basic research project, scientists have dispatched unmanned balloon-carried, camera-equipped telescopes to altitudes of above 80,000 feet to obtain high quality photographs of portions of the sun's surface. The resulting sharp photographs are impossible to obtain from the highest observatory on earth. At the Stratoscope altitude 95 per cent of the atmosphere has been left behind.

In two Stratoscope flights, 16,000 photographs of the sun have been obtained. Research workers hope that these pictures will some day unlock some of the mysteries of the sun and will reveal the true size and nature of the turbulent eddies on its surface. They also hope to learn more about the communication-disturbing solar flares and, ultimately, how the sun holds its hydrogen bomb-like thermonuclear forces in check. From studies such as this may come the first thermonuclear reactor, harnessed for the benefit of mankind.

The Stratoscope program is directed by Princeton University scientists under the sponsorship of the Office of Naval Research. They sent their first balloon aloft in August carrying a dummy telescope-camera to test the automatic pointing gear.

The first photo flight was conducted in late September, with the balloon hovering at about 81,000 feet while the camera took 8000 photographs on 35-mm film at one-second intervals. The flight began at New Brighton, Minn., where the balloon-carried equipment was launched, and ended near Athens, Wis., after the telescope-camera was automatically parachuted from its plastic envelope.

The second photo run started at Huron, S. D., and five hours later the instrument package landed near Scarville, Iowa, with 8000 more exposures taken at an altitude of 83,200 feet.

The September effort was aimed at obtaining photographs of the solar surface near the core or center. In October the pointing device was modified so the telescope-camera could scan small portions of the sun's disk from a point halfway between the rim and the core, out to the rim and back again. Several scans of this nature were made during the flight. Regardless of where the camera was pointed on the sun's surface the resulting pictures were termed the sharpest ever taken.

The solar telescope-camera used to obtain the research photos has an aperture of 12 inches, is nine and a half feet long and weighs 350 pounds. The primary element of the telescope is a quartz mirror, three inches thick and weighing 28 pounds. A secondary quartz mirror

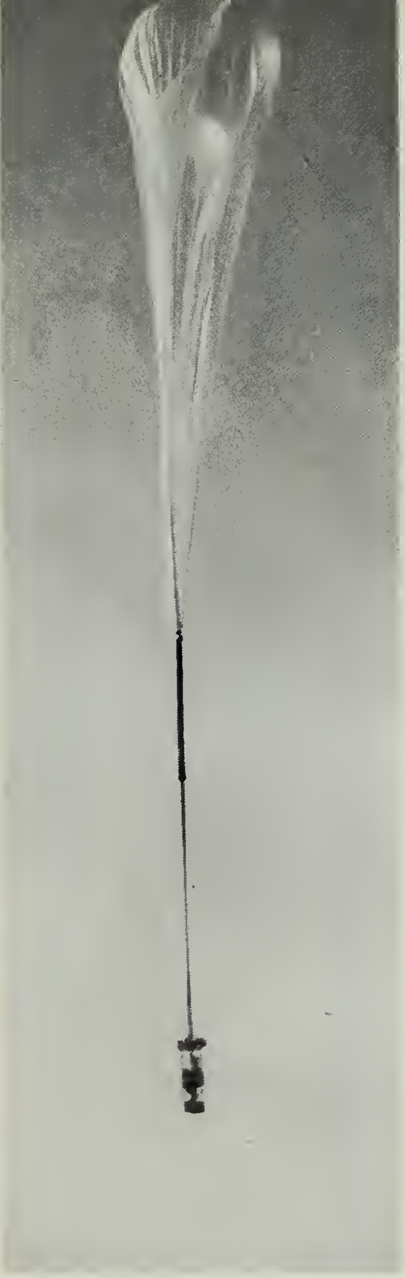
TELESCOPE with camera (left) took sun's photo. *Rt:* Dr. Schwarzchild of Princeton and CDR Cochran check plans.

f the Sun

is mounted on a swinging arm so that it remains in the sun's image only long enough to obtain an exposure. About 98 per cent of its time is spent cooling so that the mirror will not be distorted nor have its aluminized coating burned off by the solar energy concentrated on it by the telescope's primary mirror.

A relay lens, working at a magnification of 25, moves continuously, seeking the correct focus which may change owing to the heat of the sun changing the focal length of the primary optics. In 20 seconds this lens is in 20 different positions seeking perfect focus. Consequently only one-twentieth of the exposures are in focus. However, one good photograph is sufficient to answer many of the questions of astronomers.

The actual aiming of the telescope is done by four sets of light-sensitive "eyes." Two sets provide the coarse and fine azimuth (or horizontal) aiming while an equal number direct the scope in vertical movement. The eyes turn light rays into electric power which determines the amount of movement made by the telescope. "Coarse" eyes, sensitive over a region of 180 degrees, bring the lens to bear on the general target and "fine" eyes direct the optical equipment to the precise point on the sun to be photographed.



The polyethylene plastic balloon that provides the stable platform for the Stratoscope camera has a capacity of more than one million cubic feet. It carries the 1300 pounds of instruments aloft at a rate of 800 feet per minute. Hanging below the balloon are a 90-foot cargo parachute, the telescope mechanism and frame and a two-foot thick crash-pad of plastic foam which reduces the shock when the telescope makes its parachute landing. The entire Stratoscope flight train is approximately 300 feet long.

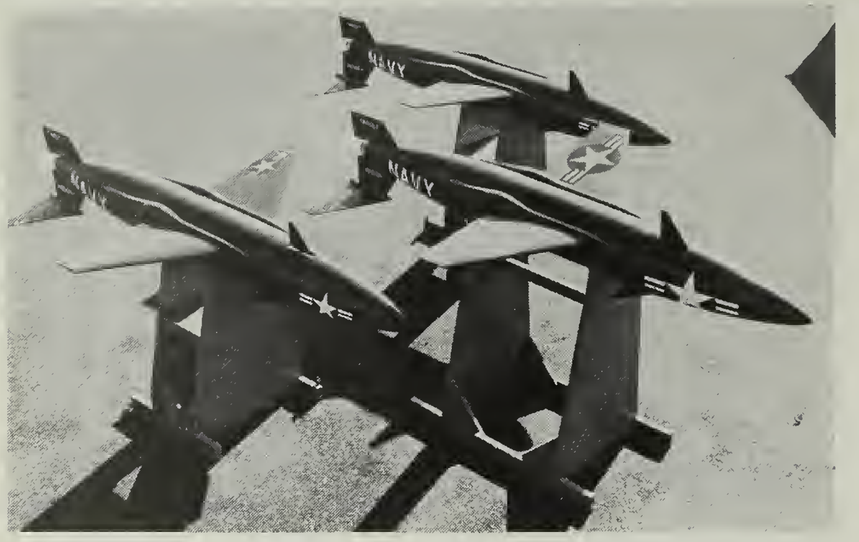
The Stratoscope flight sequence is controlled by a timer. About 105 minutes after launching, the balloon will be at its predetermined altitude where the timer turns on a telemeter transmitter, motors and electronic amplifiers. After warming up for 15 minutes the electronic gear begins to function and 14 minutes later the telescope swings down and is aimed at the target. It stays in this position for 45 minutes to allow the mirror to reach a stable temperature. Three hours after the launch the camera begins clicking and continues for 150 minutes. Then the timer turns the camera off, the telescope is latched upright for stowage and the unit is detached to float to earth beneath the parachute canopy.

No more flights are planned for Stratoscope I until 1959 when scientists hope to have replaced the camera with a TV camera and transmitter. They also have their sights set on developing Stratoscope II which they visualize as having a 36-inch telescope acting as the lens for a TV camera unit.

The Air Force Cambridge Research Center, Bedford, Mass., provided financial assistance for the solar instrumentation of Stratoscope I.

DAWN'S EARLY LIGHT—Fog shrouds preflight preparations: *Above: Skyhook* balloon and instruments seen in flight.

TODAY'S NAVY



THE MOST IN DRONES—Navy's new rocket-propelled target drone, *XKD4R-1*, is a small plastic high-speed plane designed for air-to-air missile practice.

Swordfish, Fourth Nuclear Sub

USS *Swordfish*, SS (N) 579, the Navy's fourth nuclear powered submarine which was launched in August, is the first to be built in a Navy shipyard — at Portsmouth, N. H. She is scheduled to join the Fleet in the fall of 1958.

Swordfish is the second of four 2400-ton *Skate*-class nuclear submarines currently being built and is the second Navy submarine to be named *Swordfish*.

The original *Swordfish* (SS 193) was making her 13th war patrol and was operating south of the Japanese island of Kyushu when she disappeared without trace. Captured Japanese war records do not show any submarine attack in the area at that time, and the last acknowledged U. S. radio contact with *Swordfish* was on 3 Jan 1945. She was operating in a heavily mined area and may have been sunk by detonating a Japanese mine, although no records of mine explosions in the area have been found.

Before disappearing, *Swordfish* accounted for 12 major Japanese ships for a total of 47,928 tons sunk.

The new *Swordfish* is a 257-foot twin screw attack submarine, smaller than *Nautilus* and *Seawolf*, but larger than World War II Fleet submarines. Her nuclear reactor uses pressurized water as a coolant.

Swordfish will have a crew of approximately eight officers and 75 enlisted men.

YESTERDAY'S NAVY

On 3 Dec 1775 "Washington's" navy was placed in commission. On 13 Dec 1775 the Continental Congress passed legislation which raised the pay of an able-bodied seaman to eight dollars a month. On 16 Dec 1907 the Great White Fleet steamed out of Hampton Roads, Va., to begin its cruise around the world. On 21 Dec 1943 Navy aircraft from Attu, Aleutian Islands, bombed the Paramushiro-Shimushu area in the Kurile Islands. On 23 Dec 1898 the island of Guam was placed under Navy Department control following the Spanish-American War. On 26 Dec 1837 ADM George Dewey was born at Montpelier, Vt.

Silencers for Bigger Guns

To help muffle the roar of a 105mm howitzer while testing plastic cartridge cases, scientists at the Naval Ordnance Laboratory at White Oak, Silver Spring, Md., have created a silencer to mute the shattering crash of the gun to a rumble of pipsqueak proportions.

Similar in principle to the mufflers on diesel engine exhausts, the silencer is a metal cylinder five feet in diameter and 20 feet long. Inside this tank are a series of brass baffle plates and a stuffing of copper wool. At one end is a 15-foot pipe aimed at a bank of earth. At the other end the muzzle of the gun is inserted. The device enables the tremendous gas pressures to be gradually exhausted into the atmosphere at low velocities.

Although it is possible to fire a projectile through the silencer, only blank artillery rounds are being used during the testing of plastic cartridge cases. Special orifices maintain the same high temperatures and pressures in the gun breech that would exist if a shell were fired.

Plastic for Shell Casings

A newly developed plastic, similar to that now used in cabinets for portable radios, may replace steel or brass in shell casings as a result of experiments at the Naval Ordnance Laboratory (see above story).

In firing tests with a 105mm howitzer the plastic cases have withstood temperatures of over 4300 degrees Fahrenheit at the moment of explosion and gas pressures ranging from 6000 to 35,000 pounds per square inch, coming through practically undamaged. Many could be used time after time. One of the plastic cases survived six test firings.

The plastic is ideally suited for mass production techniques.

In addition, the plastic has a low brittle point, consists of non-strategic materials and could be produced in different colors to indicate different types of artillery rounds.

This research was conducted by the Naval Ordnance Laboratory for the Army. Field tests of the case will be conducted by the Army.

Sec Def McElroy Says

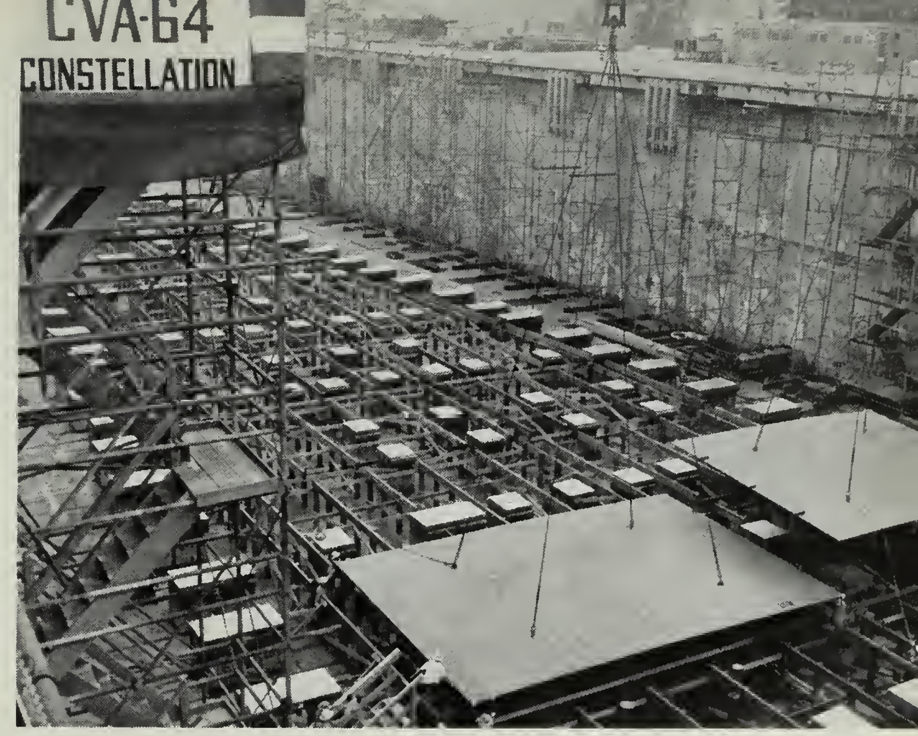
The Honorable Neil H. McElroy, successor to Charles E. Wilson as Secretary of Defense, believes it is the primary job of the nation's defense team "to maintain the military forces of the U. S. in such a state of power and instant readiness as to deter any would-be world ruler from launching a war against us or our Free-World Allies."

Hon. Neil M. McElroy

He expanded his views on his present assignment by adding, "I conceive the role of the Secretary of Defense to be that of captain of President Eisenhower's defense team. The team includes also, as top members, the Deputy Secretary, the three Secretaries, the Chairman of the Joint Chiefs and the Operating Chiefs of the Services."

Mr. McElroy expressed faith in the leaders of the various branches of the service. "I am confident that the men who represent the various Services on the defense team are the kind of broad-gauged men who will think beyond the point of view of the individual Services and will concern themselves primarily with the defense job as a whole.

"In my travels about the country, I found fine, devoted, patriotic, enthusiatic people—ranging from the airplane designers and nuclear physicists to the strategic bomber crews and missile artillerymen. The experience of meeting with them and absorbing a measure of their dedicated spirit was inspiring as background for this new job I am assuming. . . I look forward to my tour with the defense team."



LOWER PLATES—New York Naval Shipyard workers lay keel plates for *USS Constellation* (CVA 64), sixth super carrier. She will use conventional power.

Land Catapults

The new test site for evaluating aircraft launching received its official commissioning 1 October at ceremonies at NAS Lakehurst, N. J. Known as the Naval Air Test Facility (Ships Installations), the 4500-acre site, under construction for more than a year, is scheduled for completion some time in 1958.

Since all carrier-based aircraft must be catapulted and arrested, future combat effectiveness of carrier aviation will be greatly influenced by the test programs conducted at NATF(SI). Tests and evaluations of increasingly fast and heavy planes will determine whether or not they can be handled on the flight deck of any carrier before they are committed to a ship.

When fully completed, NATF(SI) will be the Navy's primary installation for the test and evaluation of new catapults and arresting gear.

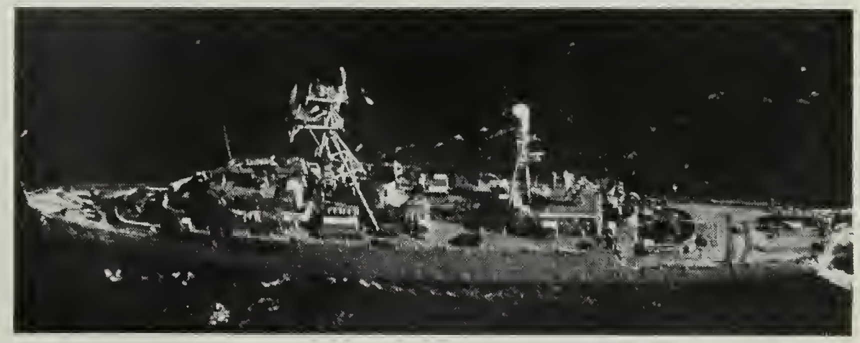
The C13 steam catapult will be installed at one site in an elevated position to study the behavior of different aircraft types as they are launched from the elevated platform. These launchings will closely simulate actual shipboard conditions.

The C14 air-gas catapult will be installed at the other site. This catapult is powered by the internal combustion catapult powerplant and will be developed and evaluated at NATF(SI) before being installed in the Navy's first atomic carrier.

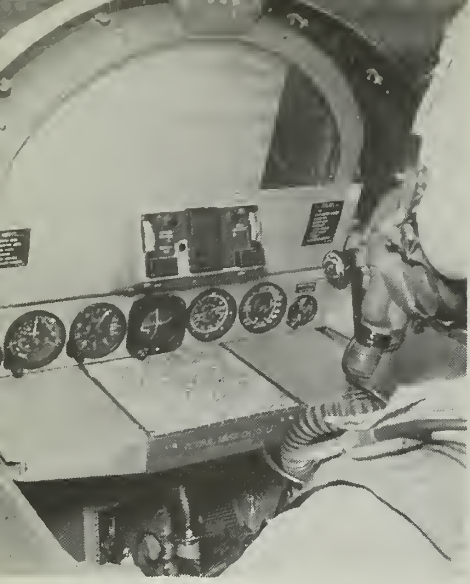
A large powerhouse is being erected adjacent to the southeast end of the runway to supply power to the catapults. On top of the powerhouse will be a small control tower which will act as the primary control center. An instrumentation shop and photo lab will also be included in the powerhouse.

A special projects building is being constructed near the taxiway leading to the land strip and catapults. It will include a hangar area and will house NATF(SI) engineering and administrative personnel. It will also include a machine shop.

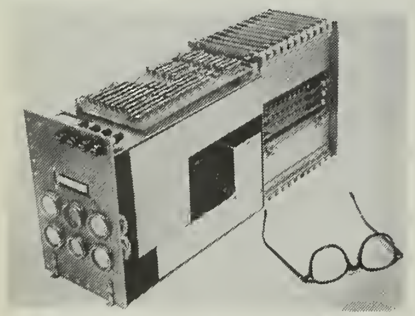
Testing of the Navy's newest aircraft launching and recovery systems with modern carrier-based aircraft will begin on full scale operations some time in 1958.



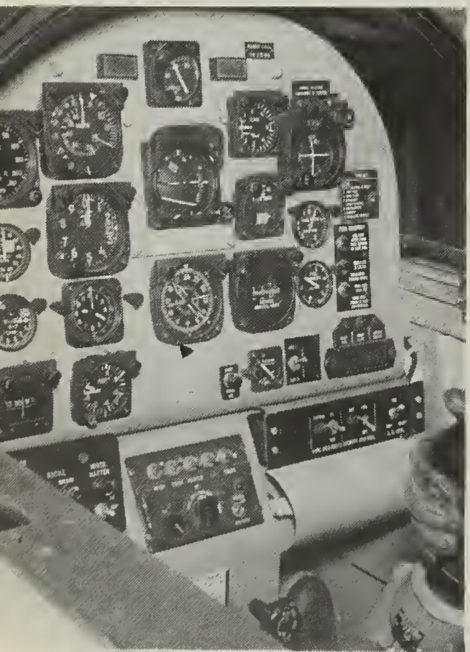
TOP ANGLE VIEW of radar picket escort vessel *USS Price* shows her speeding through Atlantic keeping a sharp lookout over, under and across the seas.



NEW INSTRUMENT panel provides more information faster with less instruments for the pilot to read.



FLYING BRAIN—Behind panel small electronic brain computes flight info.



SNOWBALLING instrumentation of old type panel to meet needs of complex jets was passing safety point.

Instrument Panel of the Future

A successfully flight-tested, cockpit instrument panel of the future has been made available to commercial airlines by the Navy and Army in the interests of air safety. The experimental computer model is one of the scientific developments resulting from four-and-a-half years of joint research to provide pilots with an improved flight instrumentation system. It has been tested aloft numerous times since 30 Aug 1957 in a high-performance Navy jet trainer plane.

The new panel, which can be used under all weather conditions, day or night, provides a television-type artificial picture of the outside world for the pilot. It not only tells him how he's doing, but provides him with information on what to do next.

Under development since April 1953, this advance in cockpit instrumentation has been a joint project of the Navy's Office of Naval Research, the Bureau of Aeronautics, and the Army Signal Corps.

The panel consists of a contact analogue displayed vertically in front of the pilot, and a mechanically operated horizontal navigational map display, together with several standby instruments.

The analogue is a two-dimensional picture, presented on a flat, transparent cathode ray tube two and five-eighths inches thick, 20 inches wide, and 11 inches high.

The picture is made up of grid lines or random dots, giving the pilot the perspective of third dimension, depicting terrain and sky information.

Signals for both the analogue and horizontal navigational display in the jet trainer are provided by a miniature airborne, electronic digital computer which accepts and processes data from nearly 20 sensors.

The digital computer serves as a bantam "answer box" which, through its electronic computations, not only shows the pilot his plane's true air speed, Mach number (speed in relation to the speed of sound), altitude and rate of climb, but also makes cruise control computations (weight, fuel, time, and distance) and comes up with performance predictions for any given set of circumstances.

The computer (or "flying brain") can make 15,000 computations a second while processing data on aircraft flight conditions. It is smaller than a breadbox and weighs less than 40 pounds.

Development of small, lightweight airborne computers was started to meet the challenge of the snowballing instrumentation and airborne control complexities of high-speed military aircraft. Where once the few needles and pointers on a pilot's instrument panel were as simple as that of an automobile dashboard, the improvement of aircraft technology brought with it an ever-increasing amount of special electronic equipment and automatic controls. There are actually hundreds of dials and switches on instrument panels of aircraft today and many pilots and engineers believe a saturation point has been reached where additional instruments and control mechanisms increase the possibility of mechanical failure or of human error.

With the new computer the electronic brain does all the calculating and navigating. Should it become necessary to change a mission in mid-flight, the pilot can simply set in the position of the new destination. The computer immediately delivers required information about the new course and informs the pilot whether or not there is sufficient fuel remaining to reach this destination.

It is expected that this type instrument panel will become operational in Navy in two to three years.

Sports at Whidbey

The over-all sports program at NAS Whidbey Island is well planned and as indicated by the number of personnel who take advantage of it, it's highly successful too. In any event, it fills many off-duty hours for sports-minded sailors.

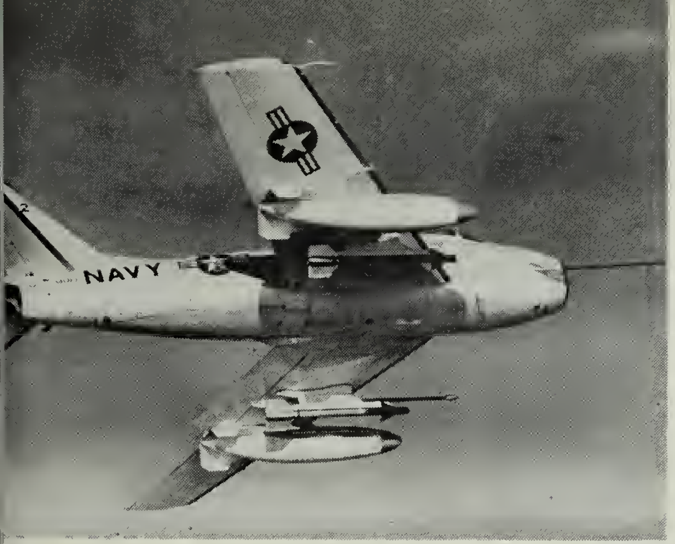
Another measure of the program's success is the reputation Whidbey athletes have made for themselves away from the air station. Teams and individuals have carried the Whidbey banner into district, regional and All-Navy tournaments, giving good accounts of themselves whenever they compete.

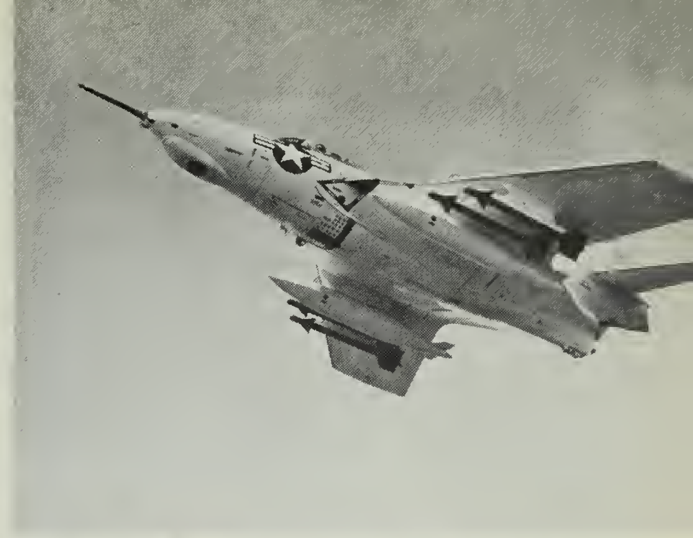
The station currently boasts:

An all-Navy boxing champion—Flyweight Antonio Adamc, AN, USN.

Two All-Navy tennis finalists—LTJG Lawrence Zaitzeff, USN, and LTJG Robert Nott, USN.

So far as team honors go, NAS Whidbey has made a habit of dominating athletics in the 13th Naval District for the past few years.





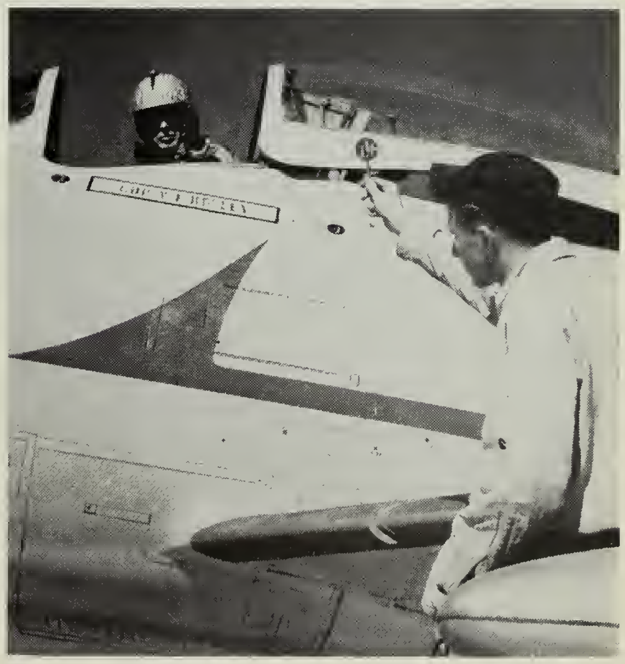
Snakes in Space

THERE IS A NEW KIND of serpent nowadays that is the talk of Navymen, but unlike the old-time sea serpents there is nothing fictitious about this flying critter that spits a deadly fire.

It's the Navy's air-to-air guided missile *Sidewinder* that was named after the equally dangerous western rattler. Both Atlantic and Pacific Fleets have planes that sport this nine-foot metal viper. *Sidewinder* finds its way to the target by means of a "heat homing" guidance system. During its first public demonstration it left no doubt as to its accuracy as the fighter firing it knocked the target drone out of the sky with the first shot.

In addition to being a highly effective air-to-air guided missile, *Sidewinder* is simple and inexpensive.

Top: Sidewinder is carried into the sky by FJ-3 *Fury* and *(Rt)* F9F-8 *Cougar* jets. *Right Center: Fury* with *Sidewinders* is fired from catapult. *Lower Right:* Guided missileman raises *Sidewinder* armament pin to signal pilot his plane is armed and ready. *Lower Left:* Ordnancemen attach *Sidewinder* to launcher on starboard wing of plane.



LETTERS TO THE EDITOR

Rotation Data Card

Sir: A rotation data card was sent to my CO about six months in advance of the expiration date of my shore duty. On 15 Mar 1957 I was ordered by Shorvey to sea, reporting aboard 9 Apr 1957. Now, when will I receive my Seavey rotation data card—this one to make my shore duty selection from sea when I'm eligible?—L. H. D., HMC, USN.

- *It will take just about the same amount of time, chief. When you qualify for the Seavey, your data card will be mailed to your commanding officer approximately six-and-one-half months before the beginning of the 12-month period in which you will be ordered ashore. Your rate falls in Segment 3. Rotation data cards for segment 3 are mailed on 15 June. The Chief of Naval Personnel commences to issue orders in October for transfer in January.*—Ed.

Clothing Allowance

Sir: *NavCompt Manual*, paragraph 044155, grants the initial clothing monetary allowance to enlisted members when they *first* enlist in the Regular Navy. BuPers Inst. 1020.4A says that Naval Reservists receive their issue of clothing when they enter the Naval Reserve rather than upon reporting for active duty.

If both are right, what happens to a man who receives the clothing issue as a Naval Reservist, is discharged, then enlists for the first time in the Regular Navy?—G. E. J., SKC, USN.

- *He would be entitled to credit of a clothing monetary allowance of $189.97, in accordance with "NavCompt Manual," paragraph 044155-2a* —but, *read on.*

Upon enlistment in the Regular Navy, the monetary value of the clothing issue in kind, which he received on inactive duty as a member of the Naval Reserve drill unit, would be checked on his pay record, and he would be issued clothing to complete a full bag.

The monetary value of this newly-issued clothing would be checked against the $189.97—Ed.

This section is open to unofficial communications from within the naval service on matters of general interest. However, it is not intended to conflict in any way with Navy Regulations regarding the forwarding of official mail through channels, nor is it to substitute for the policy of obtaining information from local commands in all possible instances. Do not send postage or return envelopes. Sign full name and address. Address letter to Editor, ALL HANDS, Room 1809, Bureau of Naval Personnel, Navy Dept., Washington, 25, D. C.

WOs in Nuclear Power Program?

Sir: There's plenty of information concerning qualifications for enlisted men and junior officers for the nuclear power submarine program, but nothing specifically for warrant officers for the surface program. Can you supply me with specific information on how a warrant machinist can get into the nuclear power program for surface ships?—L. E. K., MACH., USN.

- *Sorry, but at the present there are no provisions for warrants to enter the nuclear power program. So far this need has been met from within the program by qualified trained enlisted men already in the program who have made warrant. But this doesn't mean that the door is closed indefinitely to warrants.*

As a suggestion to you, and to any other warrant who is interested in the nuclear power program, indicate your desire for this duty on your data card to the Bureau. This will allow the detailers to have the information on hand if and when there is a requirement.—Ed.

Reversion to Enlisted Status

Sir: Before being commissioned in June 1956 as ensign, USN, through the Integration Program I was a sonarman, first class. I have since been informed that after accepting a permanent commission I am no longer eligible to revert to an enlisted status. Is this true?

If I am eligible, what rating would I be reverted to?—ENS R. H. L., USN.

- *You were commissioned under the authority of Public Law 631, 77th Congress, which does not provide authority for reversion to former enlisted status. Section 6 of the law sets forth the following terminal provisions to be exercised by the Secretary of the Navy: "The Secretary . . . under such regulations as he may prescribe, may revoke the commission of any officer on the active list appointed pursuant to this act who, at the date of revocation, has had less than seven years of continuous commissioned service in the Navy, including service as a commissioned warrant officer, and any officer whose commission is so revoked shall be discharged from the naval service."*

Of course it is possible to resign a commission and request authority to reenlist under continuous service as authorized by Article C-1403 (2) of "BuPers Manual." The needs of the service would be the deciding factor in the Navy's consideration of your reenlistment request and the rating which would be authorized.—Ed.

How to Wear Medals

Sir: Since medals came back into style for the full dress uniform the proper method of wearing them has been the subject of many arguments and several different interpretations. *U. S. Navy Uniform Regulations* (Chapter 15, section 1521, paragraph 5) states if there are more than three medals they shall overlap. The problem which confronts everyone is this: If a man has six medals does he wear two rows of three or must he wear five overlapping and one on the top row?

In the case of more than six should the lower row always be five with a lesser number in the top row?

I contend that if a person has six medals or more the bottom row must contain five with the remaining ones in the next higher rows even if the second row only has one or two medals. Of course, I am aware that a person may wear only his five senior medals if he wishes.—P. T. B., LCDR, USNR.

- *After checking with our medal authorities we have learned that a man who has six medals may wear either three, four or five medals on the lower row. Consequently the upper row would contain three, two or one award. The requirements are that the lower row may not contain a lesser number of medals than the row above; also, if a row contains more than three medals they must overlap; and a row can not contain more than five medals.*—Ed.

CB Shoulder Marks

Sir: The shoulder patch with the name of the ship or squadron to which a man is attached has been approved for Fleet and aviation personnel. Are there any plans for a shoulder patch for Seabee outfits?

Can you tell me when the wearing of the old Seabee emblem was discontinued?—L. E. C., CE1, USN.

- *Your letter couldn't have come at a better time, for the CB shoulder mark plans were just recently approved. Authority will be granted for enlisted personnel below chief petty officer attached to Mobile Construction Battalions to wear a unit identification mark similar to the present ship name sleeve mark. This approval will be implemented as soon as the CB shoulder marks are available.*

In answer to your second question, the old SEABEE emblem with the busy bee clutching the tools of his trades in his many hands while firing a machine gun, was discontinued in 1946.—Ed.

Bowling a Perfect Game

SIR: Does a 300 game have to be rolled in league play in order for a Navy bowler to receive a BuPers Achievement Award? Or, would a 300 game in practice also count?

Where could I find information on this subject?—W. H. G., YN1, USN.

• *It doesn't matter whether the game is bowled in practice or in league play. So long as it is properly witnessed and was accomplished after 1 Oct 1954, it would still count for an award. The same applies to the award for a 700 set of three games, except that it must have been rolled after 1 Jan 1956, instead of 1 Oct 1954. The request for such an award must be endorsed and forwarded by your CO.*

Further details are contained in the "Special Services Newsletter" of June 1956.—ED.

Commissions for Reservists

SIR: I read with deep interest your May issue, particularly your article "How to Earn a Commission." I was unable to find an answer in this article to the following question: "Is there any program, formal or otherwise, whereby a member of the Naval Reserve who is a college graduate can earn a commission in the Reserve, and once being commissioned continue his affiliation as a member of the Ready Reserve?"

I believe an article or lengthy answer in your "Letters to the Editor" would be warmly received by a number of Reservists as would some information on advancement to Warrant Officer for Reservists.—F. M. S., BMC, USNR.

• *Here is the answer on Reservists who are college graduates desiring to apply for a commission. If they have fulfilled their active duty obligation, they may apply for a direct commission in certain categories without incurring any additional active duty obligation. Your Office of Naval Procurement can give you the details on this program.*

Other opportunities for Reservists who have not completed college are discussed in the August 1957 issue of "The Naval Reservist," copies of which are sent to all ships and stations.

The information you asked for concerning the Reserve warrant officer program is contained in BuPers Inst. 1120.26, but here in general are the eligibility requirements:

Must be a citizen of the U. S.

Must be a petty officer first class or a CPO.

Must have served as a member of, or have been associated with a drilling unit in a pay or non-pay status, for a period of not less than one year immediately preceding the submission of application.

Must have completed 10 years' active and/or inactive naval service including Marine Corps or Coast Guard, on or before 1 July of the year following that in which your application is submitted.

Must not have reached your 40th birthday, as of 1 July of that year of application, if you originally enlisted in any branch of the service before 30 Sep 1945; or your 35th birthday, if you enlisted after 30 Sep 1945.

Must not have a record of conviction by court martial for two years preceding the date of examination.

Must meet the physical requirements.

Must agree to remain or transfer to the Ready Reserve for four years following appointment.

May not apply for more than one warrant officer category.

This should prove that "thar's gold in them thar hills" if you qualify.—ED.

IN HIGH GEAR—Training programs for conversion to guided missile ratings have been accelerated to meet increasing needs as more missiles join Fleet.

Gold Rating Badges

SIR: I have been trying to order gold rating badges through small stores, but the only stock numbers anyone there can find for them are on the ones for CPOs.

Since the badges are part of the uniform and I am supposed to wear them, will you please tell me how I can place an order. I know I could obtain the badges through Ships Service or the Navy Exchange. However, the price would be much higher than the price of a CPO badge in Small Stores.—J. G. J., AD1, USN.

• *As you know by now, gold rating badges are not carried in stock. Individual requirements are met by the Naval Clothing and Textile Office, Brooklyn 32, N. Y.*

Because gold PO1 badges are made up on an individual basis, there are no stock numbers for them. However, your Clothing and Small Stores outlet can still order the badges from Brooklyn for you. A deposit may be required and the order will probably take about five weeks to fill.—ED.

Earning Credits for G.I. Education

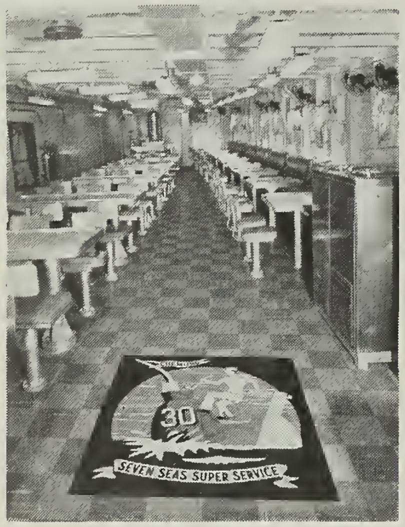
SIR: Several arguments have hit the bulkhead with a dead thud concerning the possibility of obtaining financial help from Uncle Sam for undergraduate and graduate schooling after completing service of the obligated time of contract NROTC officers. What are the facts?—LTJG J. O. C., USNR.

• *Since all you want are the facts, here they are. A contract NROTC officer after completing his obligated service would receive financial aid from the government for graduate or undergraduate schooling only if he is eligible for such training under the G. I. Bill. A member must have been on active duty before 31 Jan 1955 to qualify for the educational benefits of the G. I. Bill.*

This education, which equals one and one-half times the member's active service period, must begin within three years after discharge or release and must be completed within eight years after the separation date or 31 Jan 1965 whichever is earlier.

To compute the amount of government-paid education you have coming, count the number of months of active service you had during the period of 27 Jun 1950 to the date of first separation after 31 Jan 1955 and multiply by 1.5. The maximum amount authorized is 36 months even though you may have qualified for more.—ED.

CREW SPEAKS with pride about *Chemung's* new mess and rec area. *Right:* Ribbon is cut during opening ceremony.



SOME MESS—New tile deck covering displays inlaid official emblem of fleet oiler *USS Chemung* (AO 30).

Chemung's Crew Cheers Chow Hall Changeover

SIR: In preparation for a tour of duty in the Western Pacific, USS *Chemung* (AO 30) recently went through a three-month period of yard repair at Mare Island Naval Shipyard, Vallejo, Calif. During this time our 18-year-old oiler underwent a complete overhaul.

One part of the yard phase—the remodeling of the crew's combination recreation and mess hall held particular interest for the crew, since all hands from the skipper to the ship's mascot contributed their ideas for the project. Because of that interest, we are sending you some before-and-after pictures of the space, which serves not only as a mess hall, but also as a television room, ship's store and soda fountain, meeting hall and general lounge.

Some of the ideas incorporated in the new design were: Rearranging the outboard tables from athwartships to fore and aft, installing transom seats along the outboard bulkhead, repositioning the soft drink machine, installing curtains to partition the First Class Mess and setting the ship's emblem in inlaid tile in the deck.

The crew members take special pride in the improvements as manifestations of their own ideas and suggestions and, as you can see from the pictures, *Chemung* has good reason to be proud.—K. W. G., ENS, USNR.

- *She certainly does and so does the whole crew, for that matter. We don't know whether we can take any of the credit for giving you some of your ideas, but for the benefit of the crews of other ships due to be refitted in the near future, we invite their attention to the 'Hab Hints' article in the July 1956 issue of ALL HANDS.* —ED.

SPECIAL CAKE was baked for opening of mess hall and galley. *Rt:* Newly overhauled *USS Chemung* heads to sea.

Physical Disability Retirement

SIR: After reading your Rights and Benefits issue of ALL HANDS I have a question regarding non-disability and physical disability retirement. If 19 and one-half years of active service fulfill the 20-year obligation for the purpose of non-disability retirement, will 19 and one-half years of active service fulfill the 20-year obligation for the purpose of physical disability retirement?—F. K., EMC, USN.

- *The answer is no and here is the reason. In the case of non-disability retirement, an enlisted man can count six months or more as a whole year for transfer to the Fleet Reserve and go out on 19 and one-half, count it as 20 years and receive retainer pay computed at the rate of two-and-one half per cent of his enlisted pay multiplied by the number of years of active federal service. But when you move into the disability retirement phase, that's a different matter.*

The requirement calls for 20 years of active service in order to be retired for disability rated at less than 30 per cent. In computing the percentage multiple to be used for figuring pay, six months or more is counted as a whole year. But the hooker here is that you must have completed 20 years in order to be eligible. For example, a man with a 20 per cent disability, even though he has 19 years and seven months of active service, will not be entitled to any disability retirement pay but he may be separated for physical disability with severance pay computed in an amount equal to two months' basic pay of the appropriate pay grade for each year of service, not to exceed two years' basic pay. But the same man with 20 years, six months and one day of active service will have credit for 21 years in computing the percentage multiple and will be retired.

The answer is contained in Title 10, U. S. Code (formerly Title IV, The Career Compensation Act of 1949, Public Law 351, 81st Congress) Chapter 61, Sections 1201 and 1208.—ED.

No Messing Facilities

SIR: Your assistance is requested in settling a question that has been a topic of controversy among several of the officers here. This activity does not have a mess for single officers. Is extra pay for subsistance in order? If so, what would it amount to per day and what is the reference authorizing it?

Orders of officers performing temporary duty are stamped to the effect that no messing facilities are available.—A. B., CWO, USN.

- *We imagine you would like to hear that extra subsistence money is due you since a mess for single officers has not been established. However, officers are at no time entitled to reimbursement for subsistence in addition to the regular $47.88 per month while serving within the continental U. S.*

When on temporary duty or temporary additional duty, officers might be entitled to per diem at the rates and under the circumstances, prescribed in para. 4205 of "Joint Travel Regulations." Sorry we couldn't provide better news.—ED.

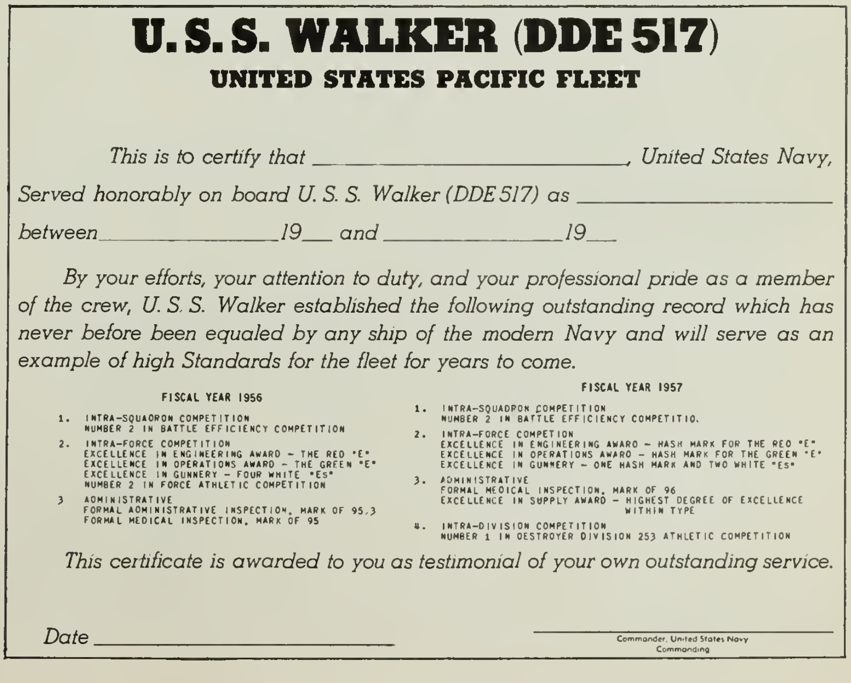
WEATHER OR NOT—Crew member of a hurricane-hunting *Super Connie* shows Reservists on training duty how weather information is analyzed.

Recognition for a Fine Crew

SIR: USS *Walker* (DDE 517) is justifiably proud of the awards that have been earned during the past two years. In bringing this to the attention of the members of the crew, who have in themselves earned these awards, *Walker* has prepared a certificate suitable for framing and for later display. Here's a copy of the certificate forwarded for your information.

The *Walker* certificate is presented to each man by the Commanding Officer upon his transfer from the ship. Career personnel treasure this certificate as evidence of their direct contribution in making *Walker* the finest in the Fleet. Personnel who are being discharged and are returning to civilian life cherish this certificate as a memory of their naval service and their direct part in making our Navy the world leader.—C. H. S., CDR, USN.

- *That's a mighty fine idea, and a mighty fine certificate. Thanks for sending us a copy of the certificate so we can pass it on to other ships of the Fleet.*—ED.



U. S. S. WALKER (DDE 517)

UNITED STATES PACIFIC FLEET

This is to certify that ____________________, United States Navy,

Served honorably on board U. S. S. Walker (DDE 517) as ____________________

between ____________ 19__ and ____________ 19__

By your efforts, your attention to duty, and your professional pride as a member of the crew, U. S. S. Walker established the following outstanding record which has never before been equaled by any ship of the modern Navy and will serve as an example of high Standards for the fleet for years to come.

FISCAL YEAR 1956

1. INTRA-SQUADRON COMPETITION
   NUMBER 2 IN BATTLE EFFICIENCY COMPETITION
2. INTRA-FORCE COMPETITION
   EXCELLENCE IN ENGINEERING AWARD – THE RED "E"
   EXCELLENCE IN OPERATIONS AWARD – THE GREEN "E"
   EXCELLENCE IN GUNNERY – FOUR WHITE "Es"
   NUMBER 2 IN FORCE ATHLETIC COMPETITION
3. ADMINISTRATIVE
   FORMAL ADMINISTRATIVE INSPECTION, MARK OF 95.3
   FORMAL MEDICAL INSPECTION, MARK OF 95

FISCAL YEAR 1957

1. INTRA-SQUADRON COMPETITION
   NUMBER 2 IN BATTLE EFFICIENCY COMPETITIO.
2. INTRA-FORCE COMPETION
   EXCELLENCE IN ENGINEERING AWARD – HASH MARK FOR THE RED "E"
   EXCELLENCE IN OPERATIONS AWARD – HASH MARK FOR THE GREEN "E"
   EXCELLENCE IN GUNNERY – ONE HASH MARK AND TWO WHITE "Es"
3. ADMINISTRATIVE
   FORMAL MEDICAL INSPECTION, MARK OF 96
   EXCELLENCE IN SUPPLY AWARD – HIGHEST DEGREE OF EXCELLENCE WITHIN TYPE
4. INTRA-DIVISION COMPETITION
   NUMBER 1 IN DESTROYER DIVISION 253 ATHLETIC COMPETITION

This certificate is awarded to you as testimonial of your own outstanding service.

Date ____________________

____
Commander, United States Navy
Commanding

Heading for Australia

SIR: I am going out on 20 and would like to know if I rate transportation to Sydney, Australia, for myself and family. Sydney is my wife's home and we hope to make it ours.—C. L. S., MMC, USN.

• *Yes. If you certify Sydney as your home of selection on your original orders, transportation to Australia may be authorized for you and your dependents from your last permanent duty station.*

Your application for this travel should be submitted on DD Form 884, with the original and three certified copies of your orders, to the Chief of Naval Personnel (Attn: Pers B3). The certification of selection of your home should be included on your original orders and the three copies of them.—ED.

Quotas for Advancement

SIR: I have some questions about the service-wide exams held in February 1957. According to various publications, there were 26 DK1s who could be advanced to DKCA, but BuPers Notice 1430 of May 1957 listed only 22 names. I checked a few other rates and found the list in the Notice somewhat short of the total authorized to be advanced. Why weren't all the names published in the Notice or are the totals shown in the July ALL HANDS incorrect?

Why can't the multiple (final) of the lowest man in each rate who was authorized to be advanced be published? I think there are quite a few of us "also rans" who are interested in knowing how we did compared to the "last man." Seems like it would be easy to publish a "promotion zone" for each rate so that a participant in the exams could either anticipate authorization to be advanced or quit worrying about it and start aiming for the next exam.—W E. M., DK1, USN.

• *Let's get one thing straight. The totals published in the July issue of* ALL HANDS *were only estimates of what the actual quotas for advancement in the various rates and ratings would be. At the time the chart was prepared it was estimated that 26 DK1s would be advanced, but when the quotas were established only 22 advancements were called for.*

The publication of a promotion zone would be impossible for several reasons. First, they change each year in direct relation to the actual quotas for advancement. A man with a final multiple of 97.38 in 1956 may have been 10 points under the last man, but in 1957 may have been rated after acquiring the same multiple in the examinations. Secondly, a man advanced may have a final multiple of 106.10 while a man with a final multiple of 110.10 was not advanced because he did not pass the examination but did score high enough to give him a final multiple higher than a man who did pass the examination and was subsequently advanced.

Remember, a man must first pass the test before his multiple for time in service, time in grade, etc., is added to his test score giving him a final multiple.—ED.

Ship Reunions

News of reunions of ships and organizations will be carried in this column from time to time. In planning a reunion, best results will be obtained by notifying The Editor, ALL HANDS Magazine, Room 1809, Bureau of Naval Personnel, Navy Department, Washington 25, D. C., four or more months in advance.

• USS *Ewa* (YTB 458)—All hands who served in this ship—formerly U. S. tug *Resolute*—and who are interested in holding a reunion in the summer of 1958 in either Chicago or St. Louis may write to John B. Greenwell, 6707 Mathew Street, St. Louis 20, Mo.

• USS *Tennessee* (BB 43)—All former shipmates who would like to hold a reunion in the San Francisco Bay Area in 1958 may write to Ben Meyer, 821 Tuolumne Street, Vallejo, Calif.

• *70th U. S. Naval Construction Battalion.* The 15th annual reunion and smoker will be held in New York City on 11 Apr 1958. For details, write to CAPT A. J. Benline, USNR, 1740 Broadway, New York 19, N. Y.

Acme of Travel

SIR: USS *Acme* (MSO 508) claims to have covered the most sea miles of any ocean minesweeper during her first year of commission. We submit the following data: Commissioned, Boothbay Harbor, Me., 27 Sep 1956; arrived Long Beach, Calif., 8 Dec 1956; deployed to Far East 4 Mar 1957; returned from Far East 13 Sep 1957. Total miles steamed during this period 26,044.

Acme is the first of the MSO 508 class, built as flagships, and is the flagship of Commander Mine Division 73. —J. W. F., LT, USN.

• *It would seem that your peers are better qualified to pass upon your claim than we are. If any of them can surpass your record you can be sure that you'll hear about it. Nevertheless, record or not, it strikes us that 26,044 miles in one year is a lot of travel.*—ED.

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(For prompt filling of orders, please mail this blank and remittance direct to the Government Printing Office. Make checks or money orders payable to the Superintendent of Documents.)

Here Are More Tips for the Sharp Looking Navyman

Sir: In your July centerspread on uniforms — "Look Sharp — Wear It Right!"—you say that the dress and undress blue jumpers should cover all but the lowest side button of 13-button trousers.

Uniform Regs, Chapter 11, Paragraph 1142, states that the dress jumper should "cover all but lower buttons on each side of broadfall trousers" and Paragraph 1143 says that the undress should "cover all but the lower button on each side of broadfall trousers."

My interpretation of this is that the two lower buttons on each side should show when the dress blue jumper is worn. Is that right?—G. E. R., SO1, USN.

• *Sometimes, simple things like these can be difficult to explain. What we mean is that the bottom button (singular) on each side should show when a man is wearing either a dress or undress blue jumper. According to the Permanent Naval Uniform Board this is also what is meant by Paragraphs 1142 and 1143 of "Uniform Regs."*

In other words, of the 13 buttons on broadfall trousers, 11 should be covered by the dress or undress blue jumper. This should (if our arithmetic is correct) leave only two buttons showing. One of these should be the bottom one on the right side of the trousers and the other should be the bottom one on the left.

Your interpretation ("two lower buttons on each side should show") is therefore incorrect if you mean that a total of four buttons should be showing.

Do we make ourselves clear this time?—Ed.

Sir: Your article "Look Sharp—Wear It Right!" on the proper wearing of the Navy enlisted uniform in the July issue of All Hands was interesting, timely and appropriate. It covered a subject dear to my heart; a properly and traditionally uniformed sailor is a proud, handsome man, and to accomplish this must be the first step of training.

In the article there were two references to the proper wearing of the neckerchief which, I feel, should be amplified. On the white uniform shown, the neckerchief is not tied in a square knot as specified in *Navy Uniform Regulations.* In the caption, instead of "Tie large knot" which leaves too much to interpretation, it is suggested that the wording "Tie square knot one and one-half inch on a side with neckerchief rolled loosely" be used. Again, loose interpretation of "roll neckerchief tightly" often results in a pencil thick phenomenon which is neither sharp nor salty.—E. N. Teall, CAPT, USN.

• *We appreciate your discerning eye and thorough knowledge of the proper way the uniform is to be worn. The Uniform Board agrees that the neckerchief on the Undress Whites in the illustration is not tied in a square knot but it should be, the same as the Dress Blues in the illustration. The practice of using a slip knot is not only unseamanlike, it is unsafe.*

Your recommended wording for the caption under "Neckerchief" would produce the desired result but would not be strictly in accordance with the wording as at present stated in "Uniform Regulations." By saying "Press and roll only. Do not press flat after rolling. Tie large knot" we tried to discourage the pencil-thick neckerchief you mention.

Your comments concerning the centerspread are well taken and certainly appreciated. The appearance of a Navyman wearing a properly fitted, regulation uniform does much to make the American public proud of the Navy.—Ed.

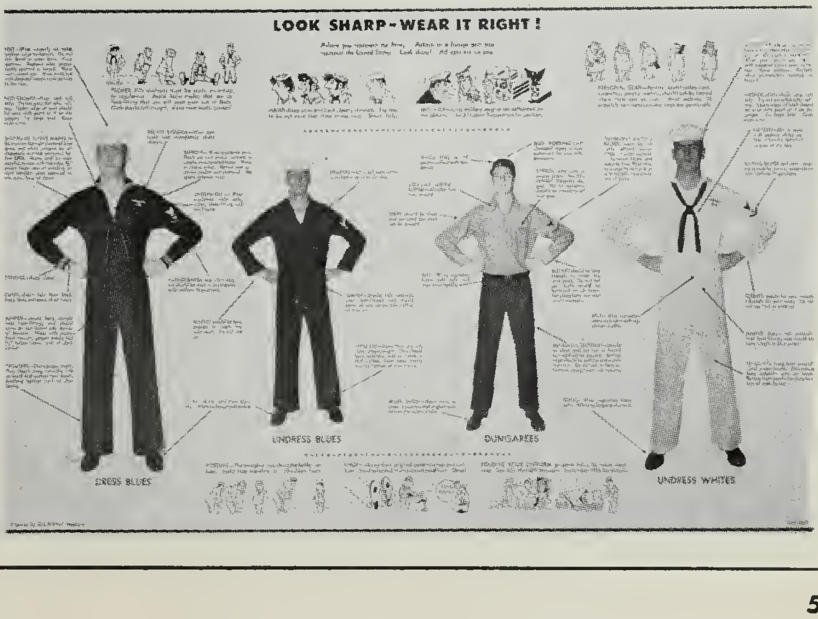
Sir: I have come across what I consider to be a breach of uniform regulations, or maybe I'm wrong. After informing several junior officers that they were out of uniform for wearing the dark, cordovan "Marine-type" shoe instead of the regulation brown shoe, I was told that this type was okayed at several of the schools they have been through.

While this situation is common among the junior officers it is, fortunately, a rare occurrence to see CPOs in other than regulation brown shoes. However, this conditon will become more widespread if officers persist in permitting the wearing of these non-regulation shoes which, at a distance, cannot be distinguished from black. Could you comment of this?—G.H.G., LT, USN.

• *You have made some very pertinent comments which point out some of the difficulties involved in strict enforcement of "U. S. Navy Uniform Regulations." A concerted effort is made in the preparation of the "Uniform Regulations" to word the description of a specific item of uniform in such a way that uniformity in appearance will result when the article is worn. On the other hand, provision is also made which permits a certain amount of discretion in choice of material and quality. It is assumed that an officer will use good judgment in the purchase of his uniforms and that he will abide with the spirit as well as the letter of the regulations.*

The Navy Department uses no special police force to see to uniform regulations but, as with other things, depends on commanding officers and others in authority for enforcement. In the specific situation that you mention, having to do with naval officers wearing dark cordovan shoes instead of regulation "brown" shoes, it is either a case of someone in authority making too broad an interpretation, in fact, a misinterpretation, of what is correct, or taking a relaxed or indifferent attitude in the execution of his enforcement responsibilities.

It is only through the efforts of interested personnel such as yourself that the high standards in appearance required of Navymen are maintained. Your interest is appreciated.—Ed.



THE BULLETIN BOARD

Hankering for a Technical Education at College? Here's How!

If you're planning to make the Navy your career and feel that a more thorough technical education will improve your advancement opportunities, the Navy is willing to cooperate with you.

Through its Navy Enlisted Advanced School Program, it offers at no cost to qualified petty officers a total of four years of college-level training at either Purdue University, West Lafayette, Ind.; Washington University, Seattle, Wash.; or certain advanced naval schools.

It is looking for applicants. In its revised instruction (BuPers Inst. 1510.69B), it has raised the age limit from 25 years to 30 years, calls attention to the advancement opportunities available to those who enter the program, and reminds all hands that USNR personnel on active duty are eligible, as well as USN.

However, to make sure that the Navy also benefits, candidates are required to obligate themselves for two years' service for each year of education. If, for example, you complete the entire program, it will be necessary to serve 12 years on active duty in the naval service after your enrollment. *Four of these years will be spent at school.*

Here's how the program works:

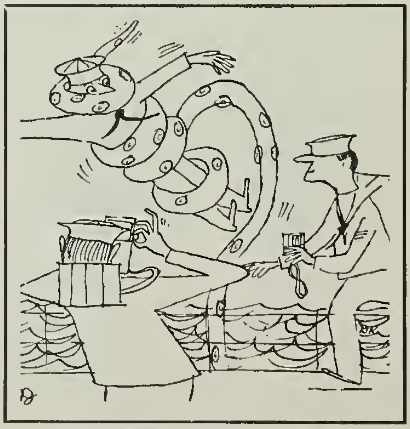
If selected for the program you will be ordered to the Naval Preparatory School, NTC, Bainbridge, Md., or the Service School Command, NTC, San Diego, Calif., for approximately nine weeks' temporary duty under instruction. You will report during the summer before you enter college in the fall. During this time, you will face further screening and will receive preliminary instruction in mathematics and orientation.

The first period of academic training will be for two school years. During the summer, you will be ordered to duties appropriate to your rating and in line with your academic progress. You will receive normal leave during the Christmas holidays and other breaks in the academic year.

After this two-year period of schooling, you will be assigned for four years to duty in line with your training and special qualifications. Then, if still qualified, you will be eligible to apply for the second phase. If selected, you will receive orders to the proper school for the completion of your training, which will last another two years.

"I'm sorry, Sonny, but you're a bit underweight."

Courses will be designated by the Chief of Naval Personnel. During the first two-year phase, they will be general in nature and will include mathematics, physics and technical subjects. During the second two-year stretch, you will complete a prescribed engineering curriculum designed to fulfill the needs of the service. Upon completion, you will be assigned to duties associated with such fields as digital computers, advanced fire control systems, advanced armament (including nuclear weapons), nuclear propulsion and other new, advanced areas.



"What exposure you giving it?"

Each of the two educational and training phases will count as a normal tour of shore duty. If you have had previous college education, you may be integrated into the program at a level based upon your previous schooling.

You will be eligible for advancement in accordance with the career pattern described below. If you are selected for officer status, including LDO and warrant, you will be continued in the program and will be eligible for the educational programs available to officers in your category.

Enlisted personnel who are USN or USNR on active duty (including the TAR program) and who meet these requirements are eligible to apply:

- Be a male third class petty officer or above, any rating.
- Have at least three' years naval service and be not more than 30 years old by 1 July of the year originally selected.
- Be a high school graduate or possess equivalent high school level GED test scores.
- Have a GCT plus ARI equal to 118.
- Have six years' obligated service as of 1 July of the year selected if in the Regular Navy, and, if USNR, enlist in the Regular Navy for six years at the rating and in the pay grade held as of 1 July of the year in which selected. If you have less than the required six years, you must agree to extend your enlistment for periods of one through four years to meet your obligated service requirements.
- Be physically qualified.
- Be a citizen of the United States.
- Be recommended by your commanding officer.

A security clearance of Secret will be required when you are selected. You may be either married or single.

Selection will be made on the

basis of your service record and test scores. If selected, you will be issued orders in time to report to the Naval Preparatory School by 1 June. There the final selection will be made. Those not ordered to the program will be transferred to a class "B" school, unless they have previously attended such a school, and then returned to the operating forces.

Applications to take the screening test must be received by the Chief of Naval Personnel (Pers B213) by 31 December of the year preceding selection.

At present, if you are selected for the NEAS Program, you can expect your career to run like this:

- If in pay grade E-4, you can expect to be advanced to E-5, and will be converted to an appropriate rating at the time of registration.
- No matter what your pay grade, you will be authorized and encouraged to apply for Warrant (W-1) after your first semester.
- You will be authorized and encouraged to apply for the LDO and Integration programs when eligible.
- If appointed warrant or if commissioned, you will be continued in the program, and will be eligible for selection for the third and fourth years of college.
- Upon the recommendation of the commanding officer of the NROTC unit, you may be advanced: From pay grade E-5 to E-6 upon satisfactory completion of the first year of college; from pay grade E-6 to E-7 upon satisfactory completion of the second year of college, or; to the next higher pay grade upon completion of the minimum service requirements for advancement.
- If you are dropped from the program you will be authorized to convert horizontally to your former rating or to any other rating for which you are qualified and which is warranted by the needs of the service.
- You will be assured assignment to duties in line with your training and special qualifications, which now include duties associated with digital computers, advanced fire control systems, advanced armament (including nuclear weapons), and nuclear propulsion.

Details may be found in BuPers Inst. 1510.69B. See also pp. 16-19 of September 1957 ALL HANDS.

HOW DID IT START

ONR—Office of Naval Research

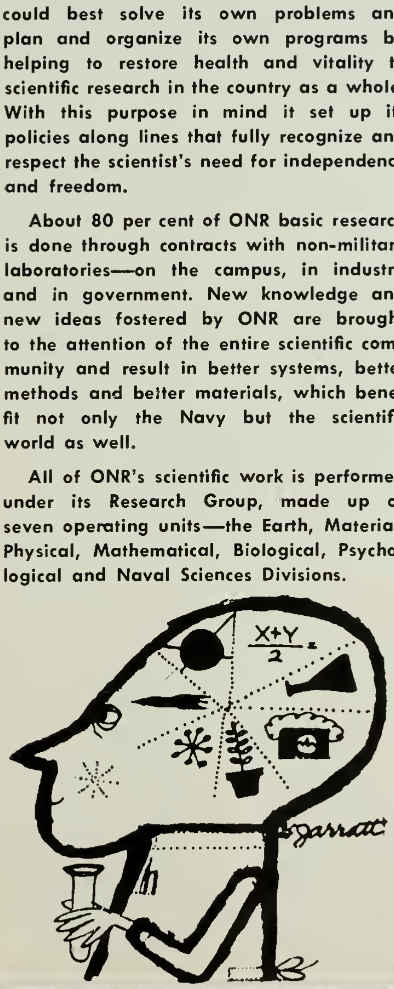
Compared to many other parts of the Navy, the Office of Naval Research is just a "youngster." It wasn't established until 1 Aug. 1946, which makes it just a little more than 11 years old.

Its most immediate ancestor was the Office of Research and Inventions, established a few months before the end of World War II to serve as a coordinating agency for the many research and development programs the Navy was then conducting. When ONR came into being it took over this function and was given another job that was even more important—helping to replenish the store of freshly discovered basic knowledge which is the essential raw material for the progress of applied science. Thus, ONR became the first peacetime venture by the United States government into large-scale support of basic work in science.

From the beginning ONR saw that it could best solve its own problems and plan and organize its own programs by helping to restore health and vitality to scientific research in the country as a whole. With this purpose in mind it set up its policies along lines that fully recognize and respect the scientist's need for independence and freedom.

About 80 per cent of ONR basic research is done through contracts with non-military laboratories—on the campus, in industry and in government. New knowledge and new ideas fostered by ONR are brought to the attention of the entire scientific community and result in better systems, better methods and better materials, which benefit not only the Navy but the scientific world as well.

All of ONR's scientific work is performed under its Research Group, made up of seven operating units—the Earth, Material, Physical, Mathematical, Biological, Psychological and Naval Sciences Divisions.



The projects of the Earth Sciences Division have ranged from the noise problem in connection with jet planes and missiles to Arctic geography and studies of the world distribution of disease. In the material sciences ONR has helped foster such developments as heat-resistant materials for aircraft, rockets and missiles; a munitions production method which doesn't use costly platinum; and important advances in the fields of liquid and solid propellants, fuels and power systems.

In the physical sciences ONR has played a leading role in the progress America has made in physics, nuclear physics and electronics. Three scientists have received Nobel Prizes while under contract with ONR's Physics Branch and many of today's nuclear physicists were trained under a program jointly sponsored by ONR and the Atomic Energy Commission. The work of the Mathematical Sciences Division has included such matters as improvements in the design of ships, boats, submarines, aircraft and missiles; the use of mathematics to predict the outcome of experiments without expensive testing; and programs to help overcome America's shortage of mathematicians.

The Biological Sciences Division can list accomplishments ranging from the first successful production of a virus in the absence of host cells to the development of fish repellents for protecting individuals or equipment in water. It also supported development of the germ-free animal as a valuable new research tool and was a pioneer in the field of skin tissue preservation and transplanting.

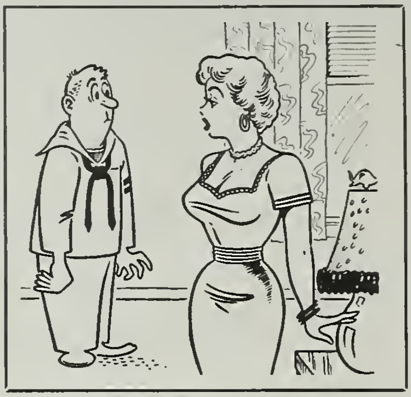
In the psychological sciences ONR has studied everything from the emergence of leadership to ways of designing equipment so that the man who runs it can do his work more easily and effectively. And, through its Naval Sciences Division, ONR has been responsible for such developments as the one-man helicopter, the rotochute for airdrops by fast-flying planes, the ejectable capsule cockpit, improvements in body armor and new pick-up gear for use in UDT operations.

This incomplete list only skims the surface of the work of ONR, but it should give you some idea of the big job this mere 11-year-old has been doing for the Navy and for science. By the time IGY is over many more items will have been added to this record, for ONR has been assigned a leading role in the American phase of that international program. It's not at all hard to see why.

EPDOPAC May Have A Mechanical Brain But It Has A Warm Heart

A super efficient, coldly calculating electronic brain has been working for more than a year in close conjunction with the sympathetic human heart to write transfer orders for enlisted personnel in the Pacific Fleet. This combination, a creation of the age of mechanization, is located in the Enlisted Personnel Distribution Office of the Pacific Fleet (EPDOPAC). It's a combination that has brought benefits to the Navyman and his family.

EPDOPAC represents the Navy's recognition of the need for mechanization in the accumulation, evaluation and use of information needed by the Distribution Office. Assignment to a new duty station is, of course, nothing new. It had been going on for years before EPDOPAC was even a gleam in its creators' eyes. The present system is considered significant because it enables distribution to be made more rapidly and efficiently. To accomplish this, modern electronic data processing machines, computors and some 200 highly specialized technicians have been assembled from personnel accounting machine installations scattered throughout the Fleet.



"I'm glad they didn't make you an Admiral right away! Now you've got all those promotions to look forward to!"

Located on the North Island Naval Air Station, San Diego, Calif., EPDOPAC is under the direct command of CinCPacFlt. Its commanding officer, officially the assistant Fleet personnel officer for enlisted distribution, serves as a member of the staff of ComServPac, who is responsible to the Fleet commander for personnel distribution.

In this activity the old-fashioned clip board full of messages and letters formerly required to move a man from one type or area within the Fleet to another, is gone. Now, a working team of representatives gathered from the major type and area commanders within the Fleet can take action upon a single initiating document from either you or your command.

Before EPDOPAC became an operating reality, natural but unfortunate rumors were alive in the Fleet. Pacific Fleet bluejackets commented that they would be handled like a cup of coffee in the automat by a spark-spitting electronic personnel officer and many thought of the machines as "electronic monsters" which would be making decisions and giving orders.

Nothing could be farther from the truth. The machines are merely complex and efficient devices *which only supply information at a phenomenal rate to the familiar distribution officer who still makes the decisions.*

Teaming the fast thinking machines with the human distributor has promoted the individual sailor from merely a "boatswain who is to be transferred" to a personality with a career history, a family, a certain amount of sea and shore duty, a desired next duty station, special qualifications and, in some cases, special problems that warrant consideration.

EPDOPAC has a definite relationship to your personal well-being. In its first year of operation the organization greatly reduced the time you must spend in receiving stations, hospitals and training centers after you have been made available for transfer. This saving in time not only helps you, but with fewer people in the transfer pipeline than ever before, it constitutes a vast manpower saving for the Fleet.

EPDOPAC tells the old command sooner that it is to lose you so that a relief can be trained. Correspondingly, the new command learns sooner that you will be arriving and they can effectively plan for your employment because of the information they receive related to your skills, preferences and background.

You and your family also benefit from the speedy EPDOPAC processing because you find out sooner when you will be going and where, thus you can plan the departure.

This speed-up of information also allows the distributor more time to insure that the less desirable duty requirements within the Fleet are equally shared.

The distributors at EPDOPAC consider the individual in each transfer that is directed. They try to incorporate any special qualifications you may have, plus any personal problems and, in some cases, retirement desires if you are one of the senior citizens.

Much time and effort have been spent by the various type representatives in placing men in accordance with their skills, desires and the requirements of the Fleet.

EPDOPAC has given Pacific sailors a "Fleet Mother" whom they may contact through official channels expressing desires, stating problems, or just asking questions. A large percentage of EPDOPAC's energy is spent in answering this correspondence.

EPDOPAC is still an infant. The future holds a bright prospect for the organization, the services that it can perform and the Fleet it serves.

Career, Benefits and Travel —So They Shipped Over

In a ceremony held aboard the carrier USS *Bennington* (CVA 20), five men representing five different pay grades in the Navy, each reenlisted for an additional six years.

The quintet, with a combined total of 40 years' service behind them are: P. S. Yarick, MMC, R. E. Camp, DT1, T. J. Langston, BM2, J. H. Ponder, AC3, and G. Richardson, SN.

Each of the different rated men gave plenty of reasons for shipping over. Reasons most prominently mentioned were for career and retirement benefits, and the opportunities for travel. R. E. Camp summed up his reason by saying, "The Navy can be as honorable and as satisfying a career as any in civilian life. The advancement possibilities are limited only by the individual's ability and initiative. I feel confident that in the next six years it will afford me every opportunity to realize my full potential."

Application Deadlines Set for Officers Requesting Change To Engineering, Special Duty

Time is almost up for officers who intend to apply for engineering, aeronautical engineering or special duty designations under BuPers Notice 1120 of 10 Oct 1957. Applications must be in the Bureau of Naval Personnel (Attn: Pers B1136) not later than 1 Feb 1958.

The Notice invited applications for change of designator from certain permanent commissioned male line officers of the Regular Navy and applications for augmentation and change of designator from qualified male line officers of the Reserve, both active and inactive. The duty categories for which application can be made are: Engineering-Code 1400; Engineering (Ordnance)-Code 1450; Aeronautical Engineering-Code 1510; Aeronautical Engineering (Aerology)-Code 1530; Special (Communications) - Code 1610; Special (Naval Intelligence) -Code 1630; and Special (Public Information)-Code 1650.

Limited duty officers and permanently commissioned warrant officers (including those with temporary commissions as ensign or above) are not eligible. For Regular line officers, eligibility requirements as to rank are as follows (signal numbers are based on 1 Jan 1957 Register):

Engineering Duty (Codes 1400 and 1450)—Must be junior to signal number 9845 and not above grade of LCDR.

Aeronautical Engineering Duty (Codes 1510 and 1530)—As of 1 Jan 1957 must have been selected to or serving in grade of LT or, as of now, must be in the grade of LCDR junior to signal number 9845.

Special Duty (Codes 1610 and 1630)—As of 1 Jan 1957, must not have been above the grade of LT with date of rank of 1 Aug 1951, and must be junior to signal number 16125.

Special Duty (Code 1650)—As of 1 Jan 1957, must not have been above the grade of LT with date of rank of 1 Jun 1952 and must be junior to signal number 17302.

For Reserve line officers the requirements as to rank are:

Engineering Duty (Codes 1405 and 1455)—Must not be above the grade of LT and must have a date of rank of 1 Jul 1953 or later.

Aeronautical Engineering Duty (Codes 1515 and 1535)—Must be a LT with date of rank between 1 Jul 1953 and 1 Jul 1957.

Special Duty (Codes 1615, 1635 and 1655)—Must not be above the grade of LT and must have a date of rank of 1 Jul 1953 or later.

There are no formal educational requirements for this program. However, officers recommended for appointment will have to compete with their Regular Navy contemporaries for promotion and assignment, so they should have similar educational backgrounds. They should also be about the same age.

Applications are particularly desired from officers with baccalaureate degrees or higher and/or experience related to the field for which they are applying. Details on this and other aspects of the program can be found in the BuPers Notice mentioned above.

Correspondence Course For Aviation Electronics Technician

A correspondence course entitled ***Aviation Electronics Technician 3*** *(NavPers 91612)* is now available and the course for ***Fire Controlman 2,*** Vol. 3 (NavPers 91320-A) has been discontinued.

The new course, which has nine assignments and is good for 27 retirement points, will be administered by your local command providing your division officer finds it suitable to your rate and training program.

Those on inactive duty may obtain the course from the Correspondence Course Center by using form NavPers 580.

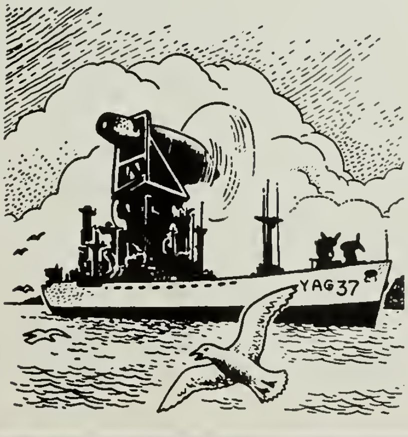
WHAT'S IN A NAME

Air Props—for Ships

A wide variety of schemes has been tried for propelling ships—from sail and wind rotors to nuclear power. But possibly one of the oddest sights a modern seagoing man could encounter would be USS *YAG 37* underway.

This 14,000-ton experimental ship is completely dependent for propulsion on four 5000-horsepower aircraft turbo-propeller engines mounted on the fore and after decks.

The engines are set on 40mm gun mounts which can be controlled in train from a central station. The engines were removed from a *Constellation* airplane and the gun mounts were obtained from surplus stock.



The use of air propellers is not new. They have been widely used on small craft where underwater propulsion is not workable, such as swamp boats. And the British installed aircraft jet engines on a 1600-ton ferry boat, *Lucy Ashton*, for a series of propulsion trials to bring together model and ship resistance data.

So it was not surprising that air propellers could be used on larger ships to meet special requirements where underwater screw propulsion is undesirable or impractical because of floating debris or shallow water.

Operations were conducted at a total power rating of about 12,000 shaft HP in the interest of engine life since the engines used were developmental models. In a trial run under full displacement, *YAG 37* got up to seven knots. Additional speed could be achieved by the use of propellers designed for this type of operation, but the performance with propellers designed for aircraft use was considered adequate to prove the effectiveness of the system.

The test results show the ship to be highly maneuverable with this propulsion system, actually being better than a conventional power plant at lower speeds or at a standstill. On approaching piers or mooring buoys the capability to apply propulsive force in any direction was a substantial improvement and entirely eliminated the need for tug boat assistance.

Latest List of Motion Pictures Scheduled for Distribution To Ships and Overseas Bases

The latest list of 16-mm. feature movies available from the Navy Motion Picture Service, Bldg. 311, Naval Base, Brooklyn 1, N. Y., is published here for the convenience of ships and overseas bases. The title of each picture is followed by the program number.

Those in color are designated by (C) and those in wide-screen processes by (WS). Distribution began in October.

These films are leased from the movie industry and distributed free to ships and most overseas activities under the Fleet Motion Picture Plan.

The Vintage (904) (C) (WS): Drama; Mel Ferrer. Pier Angeli.

Oh Men, Oh Women (905) (C) (WS): Comedy; Dan Dailey, Ginger Rogers.

20 Million Miles to Earth (906): Drama; William Hopper, Joan Taylor.

Hidden Fear (907): Drama; John Payne, Conrad Nagel.

The Iron Petticoat (908) (C): Comedy; Katherine Hepburn, Bob Hope.

Heaven Knows, Mr. Allison (909) (C) (WS): Drama; Deborah Kerr, Robert Mitchum.

Tammy and the Bachelor (910) (C) (WS): Drama: Debbie Reynolds, Leslie Nielson.

Love in the Afternoon (911): Drama; Gary Cooper, Audrey Hepburn.

The 27th Day (912): Science Fiction; Valerie French, Gene Barry.

Beyond Mombasa (913) (C): Adventure Drama: Donna Reed.

All-Navy Cartoon Contest
Theodore Russel, PN3, USN

"He claims he was only delivering a few presents at the recruiting office."

Boy on a Dolphin (914) (C) (WS): Drama; Alan Ladd, Sophia Loren.

The River's Edge (915) (C) (WS): Drama; Anthony Quinn, Ray Milland.

War and Peace (916) (C): Drama; Audrey Hepburn, Henry Fonda.

The Buckskin Lady (917): Drama; Patricia Medina, Richard Denning.

The Fuzzy Pink Nightgown (918): Drama; Jane Russell, Keenan Wynn.

Joe Butterfly (919) (C) (WS): Drama; Audie Murphy, George Nader.

The Land Unknown (920) (WS): Science Fiction; Jock Mahoney, Shawn Smith.

The Vampire (921): Horror; John Beal, Colleen Gray.

Voodoo Island (922): Horror; Boris Karloff, Beverly Tyler.

The Pajama Game (923) (C): Musical; Doris Day, John Raitt.

Silk Stockings (924) (C) (WS): Musical; Fred Astaire, Cyd Charisse.

China Gate (925) (WS): War Drama; Gene Barry, Angie Dickinson.

Hot Rod Girl (926): Drama; Lori Nelson, John Smith.

The Giant Claw (927): Science Fiction; Jeff Morrow, Mara Corday.

The 3:10 to Yuma (928): Adventure Drama; Van Heflin, Glenn Ford.

Changes in Exam Requirements For Air Controlman Ratings

If you're planning on taking the February 1958 service-wide examination for the ratings of Air Controlman (AC), Air Controlman T (ACT)), or Air Controlman R (ACR), you had better check over the latest qualification modification. Here, in essence, is the change.

In the past, commanding officers were authorized to waive the requirement of the CAA certificate only in areas where there was no CAA certifying representative. The requirement was also waived for air controlmen not performing control-tower duties. Now, commanding officers are authorized to waive this requirement only in these cases:

- For personnel who are attached to overseas stations where it is impracticable for the CAA examiner to administer the written examination without unreasonable delay. (These stations will be specifically designated by the Chief of Naval Personnel.)
- Personnel attached to ships.
- Personnel who become eligible for waiver in the first two cases and who report *less* than six months before the advancement examination date to a command where the CAA Form 578A certificate requirement can be fulfilled.

Since personnel in all higher pay grades must possess the qualifications prescribed for the lower rates of a rating, individuals who have had the CAA Control-Tower Operators Certificates waived for advancement in the past (unless it is again waived) must obtain the certificate to be eligible for further advancement.

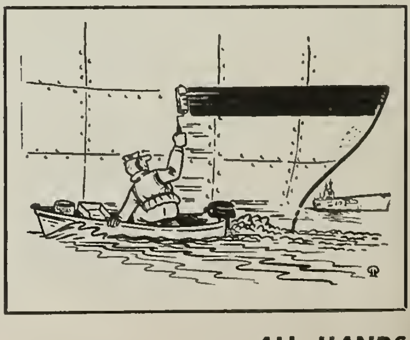
The restriction in the conditions under which waivers had been granted is due to the steadily increasing need for CAA-certified control-tower operators. Under CAA regulations, personnel advanced with such waivers are not qualified control-tower operators.

Further detailed information can be found in BuPers Notice 1410 of 15 August.

Regular and Reserve Officers Promoted to Captain, Command

Promotion of 278 Regular Navy and Naval Reserve commanders and lieutenant commanders has been approved by the President.

Lieutenant commanders selected for temporary promotion to commander are as follows: Civil Engineer Corps, 16; Dental Corps, 15; Supply Corps women, two; Chaplain Corps, 10; Nurse Corps, 51; Medical Service Corps, 40; Medical Corps, 29; Supply Corps, 61; limited duty only Supply Corps, three; Medical Service Corps women, one.



Navy Plans 'Proficiency Advancements' Following EM Exams

Proficiency advancements for enlisted personnel are tentatively planned to take effect during fiscal year 1958 upon the basis of the service-wide examinations scheduled for February.

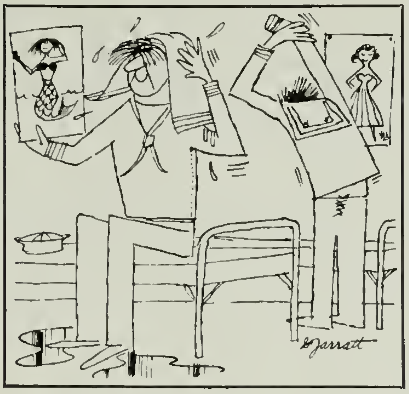
These advancements mean a raise in pay without military advancement and are in recognition of skill in rating or demonstration of outstanding effectiveness in your assigned specialty. They entitle you to all pay and allowances of the higher pay grade but do not include military prerogatives.

Proficiency advances will be allocated among Navy enlisted personnel on active duty in the Regular Establishment *in all ratings.* The service-wide examination system, including final advancement multiple and recommendation of your commanding officer, will be used. For proficiency advancements from rates in which there are not enough technically qualified personnel who meet time in grade eligibility requirements for military requirements, time in grade requirements will be reduced.

For other rates in which there are sufficient numbers, eligibility requirements for proficiency advances will be the same as for military advancement in petty officer grade. These advances during fiscal year 1958 will be limited to one pay grade above military grade, but they cannot be made applicable to chief petty officers as they are already in the highest enlisted pay grade provided by law. A maximum of 10,000 proficiency advancements are planned for this year.

Here are the eligibility requirements for the rates listed below:

- Six months as PO3 or PO2, and one year as PO1. Final eligibility date is 16 May.
- Recommendation of commanding officer, based on outstanding performance and technical skill.
- Satisfactory completion of practical factors, and performance tests if applicable, for the next higher grade of your rating. Completion of Navy Training Courses is not required for the February examinations for proficiency advancement in the rates listed below.



Here are the rates to which the eligibility requirements listed above are applicable: ET2, ET3, AT1, AT2, AT3, FT2, FT3, AQ1, AQ2, AQ3, GS2, GS3, GF2, GF3, AC1, AC2, AC3, RD1, RD2, RD3, RM1, RM2, RM3, TE(RM)1, TE(RM)2, TE(RM)3, SO1, SO2, SO3, CT1, CT2, CT3, TD2, TD3, EM1, EM2, EM3, AE1, AE2, AE3, IC1, IC2, IC3, TM3, MM2, MM3, BR1, BT1, BT2, BT3, EN3, AD3, AM2, AM3, MR1, MR2, PH3, AG1, AG2, AG3, DT3, DC3, FP3, ME3, BU2, BU3, PR3, QM2, QM3, SM2, SM3, YN3, TE(YN)3, PN3, SK3, AK3, DK3, JO3, MU2, MU3.

Eligibility requirements for proficiency advancement in ratings not listed above are the same as those specified in BuPers Inst. 1430.7C. Proficiency advancements in these ratings will be awarded to the most outstanding personnel not advanced to the next military grade because of quota limitations.

If you are recommended to compete for proficiency advancement, you will be examined for the pay grade next higher than the one you are now holding. For example, if you are an RD2, and are recommended for proficiency advancement to RD2-P1, you will take the RD1 exam.

An outline of the preliminary tentative plan for implementing the proficiency program may be found in NavAct 18 (BuPers Notice 1418 of 16 October). Detailed information will be provided in a BuPers Instruction which will be distributed later.

Third Marines Lead in Memorial Stadium Fund Race

Christmas brings up the problem of presents and in this connection the Navy-Marine Corps Memorial Stadium Fund hastens to suggest that, for one dollar sent to Box 777, Annapolis, Md., a 45 rpm recording by a famous name band of "Anchors Aweigh" and the "Marine Corps Hymn" will be mailed to any address in the states, territories or possessions you designate. A card bearing your name will be enclosed. It's a nice way to handle a lot of your Christmas shopping and will bring the construction of your Memorial Stadium just that much closer.

It may not be necessary for you to send your dollar to Annapolis. Many Navy Exchanges are carrying this record in stock. (Of course, the best way to handle this problem is to buy your record at the Navy Exchange and send a contribution to Box 777, anyway.)

Funds raised in the drive so far amount to $822,000 and $1,300,000 more is needed. The Third Marine Division on Okinawa topped all comparable units recently by contributing $13,800. The Submarine Force Pacific Fleet climbed over the two dollar mark per man and is still going up. The inaugural 150-pound Army-Navy football game resulted in $18,000. Carnivals and benefits for winter and spring are being planned by many stations.

Contracts will be let in March 1958 and construction will commence shortly thereafter. The stadium is expected to be completed in 1959 ready for the three Navy football games scheduled in the stadium for that year and for other inter-service contests.

Christmas mail orders are also being taken for five dollars for an attractive letter opener which is a replica of a naval officer's sword (see ALL HANDS, November 1957, page 49).

The Memorial Chair section, for the living and dead, now ranges from John Paul Jones to men entering the service this year. Many of these chairs, which may be dedicated for $100, have resulted from letters written by men like you to friends and families who have lost a loved one in the service.

DIRECTIVES IN BRIEF

This listing is intended to serve only for general information and as an index of current Alnavs and NavActs as well as current BuPers Instructions, BuPers Notices, and SecNav Instructions that apply to most ships and stations. Many instructions and notices are not of general interest and hence will not be carried in this section. Since BuPers Notices are arranged accordin to their group number and have no consecutive number within the group, their date of issue is included also for identification purposes. Personnel interested in specific directives should consult Alnavs, NacActs, Instructions and Notices for complete details before taking action.

Alnavs apply to all Navy and Marine Corps commands; NavActs apply to all Navy commands; BuPers Instructions and Notices apply to all ships and stations.

Alnavs

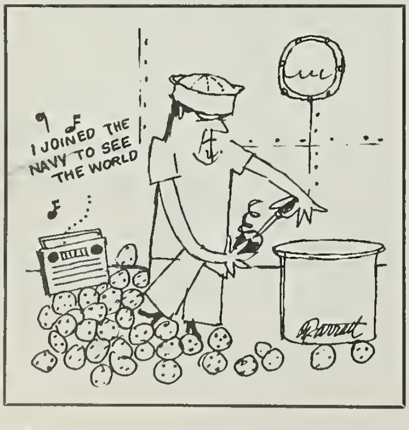
No. 47—Urged wide dissemination of BuPers Inst. 111.4B, which is concerned with the nomination of qualified enlisted personnel for the NROTC program. Deadline for nominations was 18 October.

No. 48—Concerned with the rights of an accused person to be represented by counsel at pretrial investigation.

No. 49—Announced approval by the President of reports of selection boards which recommended USN and USNR officers for promotion to captain in the Medical Corps, Supply Corps, Chaplain Corps, Civil Engineer Corps, Dental Corps, Medical Service Corps and Nurse Corps; to commander in the Medical Corps, Supply Corps (men and women), Chaplain Corps, Civil Engincer Corps, Dental Corps, Medical Service Corps (men and women) and Nurse Corps.

Instructions

No. 1306.62A—Adds refinements to the basic instruction, BuPers Inst. 1306.62, which completed the criteria and procedures governing the shore/sea and sea/shore rotation of enlisted personnel.


I JOINED THE NAVY TO SEE THE WORLD

No. 1306.66—Announces qualifications and sets forth the procedure in requesting transfer to duty as Technical Adviser at the U. S. Navy Training Publications Centers at Memphis, Tenn., or Washington, D. C.

No. 1412.10A—Announces information, procedures and regulations concerning the promotion of Naval Reserve ensigns on active duty and inactive duty.

No. 1416.4B—Announces regulations governing the professional qualifications for promotion of Naval Reserve officers who are not on active duty, or who have recently reported for active duty.

No. 1440.18A—Provides information concerning the program for adjustment of the enlisted rating structure through channeling of pay grade E-3 personnel into ratings where they are needed and through conversion of petty officers from ratings where personnel may be spared to those where they are needed.

No. 1510.69B—Outlines a program of advanced technical education and training for enlisted personnel, and tells how to apply for the Navy Enlisted Advanced School Program.

No. 1520.20A—Establishes eligibility requirements and invites applications for heavier-than-air flight training from commissioned officers and officer candidates leading to their designation as naval aviators (HTA).

No. 1560.10A—Sets forth the details of the operation of the Navy's tuition aid program.

No. 1540.27B—Describes current practices governing the heavier-than-air/lighter-than-air integration program.

No. 1910.5D—Describes procedures and requirements dealing with the separation of enlisted personnel upon expiration of active obligated service.

Notices

No. 1418 (27 September)—Announced servicewide examinations for enlisted personnel scheduled for February 1958 and provided further information on these examinations.

No. 1552 (3 October)—Notified commands of the existence of a Nuclear Power Orientation Presentation Package designed to provide illustrated, nonclassified, nontechnical material on the subject of nuclear power.

No. 1620 (3 October)—Reemphasized and supplemented BuPers Inst. 1620.2, which is concerned with the procedure for action relative to claims and complaints regarding personal indebtedness on the part of naval personnel.

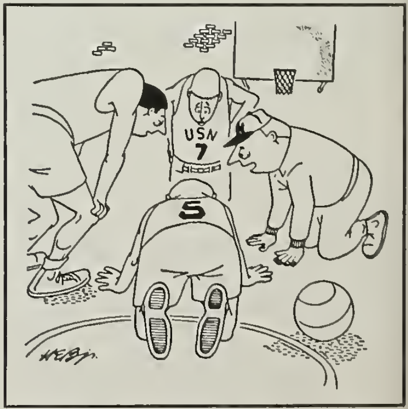
No. 1520 (8 October)—Announced the selection of officers for the submarine class convening 6 Jan 1958 at the Submarine School, New London, Conn.

No. 1120 (10 October)—Invited applications from permanently commissioned USN line officers for engineering duty, aeronautical engineering duty or special duty, and USNR officers, both active and inactive, for augmentation and designation as engineering duty, aeronautical engineering duty or special duty.

No. 1440 (10 October)—Established procedures for making changes in the CS and PR ratings to conform with modifications in the Enlisted Rating Structure.

No. 1520 (10 October)—Announced Change No. 2 to BuPers Inst. 1520.20A, which is concerned with the qualifications for heavier-than-air flight training of commissioned officers and officer candidates leading to designation as naval aviators.

No. 1301 (14 October)—Announced the procedure for assignment of enlisted men of the Navy and Naval Reserve on active duty to the U. S. Military Academy Preparatory School.



"I'm sorry son, but basketball's a big man's game."

The Time Is Now—Start Preparing For The February Exams

If you're fond of the better things in life (and who isn't?) you'll be happy to know that the Navy is again offering you a chance to reach for more of them—in the February 1958 examinations for advancement in rating.

In most ratings, advancement opportunities remain good, but competition will be stiff. To help you prepare for the Big Day your CO has been alerted to step up in-service training programs at your activity.

The examinations will be open to all ratings in pay grades E-4 through E-7, except for the PI and AL ratings which are being consolidated with others.

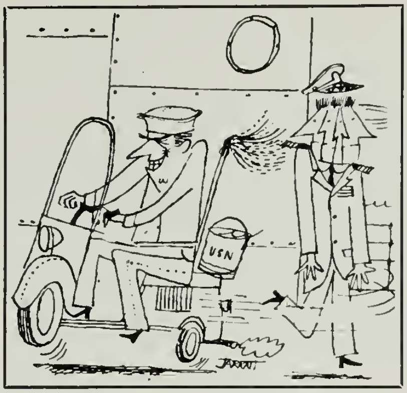
For many of those taking the exam this will be the first time their Enlisted Performance Evaluations will be used in computing advancement multiples.

Here, by pay grade, are the dates for which the examinations are scheduled:

E-7 (CPO)—Tuesday 4 February
E-4 (PO3)—Thursday 6 February
E-5 (PO2)—Tuesday 11 February
E-6 (PO1)—Thursday 13 February

The examination may be taken for any one of the following purposes:

- Advancement in rating—this applies to all personnel on continuous active duty (USN and USNR, including TARs).
- Horizontal change in rating or change in rating and concurrent advancement in rating from AL to AT and from PI to LI.
- Horizontal change in rating or change in rating and concurrent advancement in rating from TE(RM) to RM and from TE(YN) to YN. Telemen (RM) or TE(YN) may participate for advancement only, for horizontal change in rating or for change in rating and concurrent advancement. Seamen in training for TE(RM) cannot compete for advancement to TE(RM)3, but they may compete for advancement to RM3. Designated TE(RM) strikers may compete for advancement to either TE(RM)3 or RM3. Since no TE(YN)3 examinations will be available this February or in the future, seamen or TE(YN) strikers in training for TE(YN) may compete for advancement only to YN3.



- Change in rating and concurrent advancement in rating to Nuclear Weapons Man (NW).
- Horizontal change in rating or change in rating and concurrent advancement in rating for personnel enrolled in courses of instruction designed to prepare them for change in rating.
- Concurrent advancement and change of rating to BR1 or BRCA by qualified personnel in pay grades E-5 or E-6 of the BT rating, or change of rating from BTC to BRC.
- Horizontal change in rating where examination has been authorized in individual cases by the Chief of Naval Personnel.

No examinations will be given for advancement to the Emergency Service Rates of CSG1, CSB1, CSR1, PRS1, PRSC, PRM1 or PRMC, all of which have been disestablished. Personnel advancing to pay grades E-6 and E-7 of the CS or PR ratings will be given an examination for advancement to the appropriate general service rate.

Regular Navy and TAR personnel in pay grade E-3, who are recommended for advancement to pay grade E-4 in the ET, FT, AD, AC, PH, AO, AQ, AB, AT, TD, AE, AM or PR ratings will be examined for advancement to a Selected Emergency Service Rate only. Reserves (excluding TARs) may be examined for and advanced to an Emergency Service Rating in their path of advancement even though that rating has not been activated for Regulars and TARs. For example, a Reserve might be examined for and advanced to, either ADJ3, ADR3 or ADP3, even though the ADP3 rate has not been activated in the Selective Emergency Service Rates program.

Regulars and TARs in the AC3, ACW3, ACR3, PR3, PRS3 and PRM3 rates who are recommended for advancement to pay grades E-5 will be examined only for advancement to the Selected Emergency Service Rates of ACW2, ACR2, ACT2, PRS2 or PRM2.

Examinations for advancement in rating to GS3, MM3, BT3, GF3, AMH3, AMS3, PRS3 or PRM3 rates are not planned for May 1958. If you failed the Nov 1957 examination for advancement to those rates you may participate in the February service-wide examination if you have maintained your eligibility and are recommended by your CO.

Personnel taking the examination for advancement in the air controlman rating may have the CAA certificate requirement waived if they: Are attached to overseas stations where it is impracticable for the CAA examiner to administer the written test without unreasonable delay; are serving on board ships; or were eligible for waiver under the above conditions and reported less than six months before the service-wide examination date to a command where the certificate requirement cannot be met.

Further details on the February examination may be found in BuPers Notice 1418 of 27 Sep 1957 and supporting instructions.

Three New Enlisted Correspondence Courses Ready

Three new Enlisted Correspondence Courses are now available.

Constructionman (NavPers 91562-1) and ***Boilerman 3*** (NavPers 91511-1), both evaluated at 18 retirement points.

Molder, Chief (NavPers 91556) is an eight-assignment course with 24 retirement points.

Enlisted Correspondence Courses will be administered (with certain exceptions) by your local command instead of by the Correspondence Course Center.

If you are on active duty, your division officer will advise you whether or not any of the above courses is suitable to your rate.

PERSONAL AFFAIRS RECORD

of

____
(First) (Middle) (Last name)

____
(Organization) (Service number)

I. Personal record:

1. Place and date of birth ________________________
(Town) (State) (Month, day, year)

2. Naturalization (if applicable)
by ________________________
(Designation and location of court granting naturalization)

3. Parents' names:
Father ________________________
(First) (Middle) (Last)
Mother ________________________
(First) (Maiden Name) (Last)

4. Marriage:
to whom ________________________
(First) (Middle) (Last)
Place and date ________________________
(Town) (State) (Month, day, year)

5. Children (full name, place and date of birth):
____
____
____

6. Name and address of personal lawyer or trusted friend who may be consulted in regard to my personal or business affairs:
____
(Name of lawyer or friend)
____
(Street) (Town) (State)

II. Family records (location):

1. Birth certificates or other proof of date of birth of self and of each member of immediate family (required by insurance companies and Social Security Administration) ________________________
____
____
____

2. Naturalization papers (if not born in United States) ________________________
____

3. Marriage certificate (necessary in order to establish claims for certain payments and benefits and in connection with the will, also social security benefits) ________________________
____
____

4. Divorce papers or certified copies thereof (in case either spouse has been divorced) ________________________

III. Other important papers:

1. Will:
   a. I have not executed a will,
   (or)
   b. I have executed a will:
      1. Location ________________________
      2. Lawyer's name and address ________________________
      3. Executor's name and address ________________________

2. Power of Attorney:
   a. I have not executed a power of attorney,
   (or)
   b. I have executed a power of attorney dated ________________________
   (Month, day, year)
   naming ________________________
   (Agent or attorney in fact) (Address)

3. Income tax:
   a. Copies of my Federal income tax returns and related papers are located at ________________________
   b. Copies of ________________________ income tax returns and related
   (Name of State)
   papers are located at ________________________

4. Other taxes:
   a. Copies of my ________________________ tax returns and related
   (Property, etc.)
   papers are located at ________________________

IV. Insurance:

1. My life is insured as follows:

2. Type: Government ________ Commercial ________ Both ________

Insurance Company	*Policy No.*	*Amount*
________________	____________	____________
________________	____________	____________
________________	____________	____________

3. It is payable by:
Lump sum ________ Installments for a number of years ________

4. The policies are located at ________________________

5. Premium receipts are located at ________________________
(Add in manner similar to above pertinent information thought necessary regarding property, accident, liability, or other insurance protection you may have.)

V. Social security data:

1. Social security number ________________________
2. Location of social security card or stub ________________________
3. Social security tax payments have been made. Yes ___ No ___

4. Location of up-to-date employment record, including place and type of work in each case:
____
____

VI. Property ownership or interest therein:

1. Real estate located at ________________________
   a. The property is encumbered by a ________________________
   (Mortgage, trust, deed, etc.)
   Held by ________________________
   b. Taxes on the property are paid to and including the year ________________________
   c. The property is insured with ________________________
   (insurance company)
   Policy No. ________ against ________________________
   (Fire, damage, liability, etc.)
   for $________________________
   d. The papers are located at ________________________
   (Location of deed, abstract,
   ____
   mortgage, insurance contracts, and other papers)

2. (Add as many other entries as may be required to complete record as to each piece of real estate in which you have an interest.)

3. Automobile record:
   a. ________________________
   (Make) (Model) (Year) (Motor number) (Body number)
   b. Under ________________ dated ________________________
   (Title number) (Month, day, year) (State)
   c. It is now licensed for use by ________________________
   d. The automobile is insured with ________________________
   (insurance company)
      1. Against ________________________
      (Fire, theft, damage, collision, etc.)
      (and)
      2. Against ________________________
      (Personal injury, property damage resulting from operation)
      3. Premiums are paid to ________________________
      (Due date of next premium)
   e. The papers are located at ________________________
   (Location of title, mortgage,
   ____
   insurance, and other papers)

4. Personal property:
   a. (In manner similar to above add any information thought advisable concerning other large items of personal property owned, such as a boat, machinery, livestock, goods in storage, etc.)

VII. Bank accounts:

1. ________________________ Account
(Checking or saving; joint or individual)
in ________________________
(Name of bank and location)

2. (Add as many similar entries as may be required to show all bank accounts.)

VIII. Safety deposit box:

1. Name of bank or trust company ________________________
Address ________________________
2. Location of key ________________________

IX. United States War or Savings bonds ________________________
(Where located)

1. Person designated as ________________________
(Co-owner) (Beneficiary)
2. Savings bonds by serial numbers and denomination ________________________
(Location)
____
(This is necessary to replace lost bonds)

X. Stocks and bonds and securities owned:

____
____

XI. Memorandum:

1. (Enter any additional data desired regarding insurance, allotments, military record, instructions to dependents, Veterans' Administration claim number, any former service or serial number, etc.)
____
____

2. I do/do not desire that a copy of this statement be forwarded, together with copies of pertinent papers, to
____
(Name) (Relationship)
________________________ for his/her
(Street and number) (City) (State)
information and safekeeping.

Date: ________________________

Signature ________________________

YOUR DD 93-1 (Record of Emergency Data) is a valuable and useful document which insures up-to-date information for use by the Navy in the event of your death, serious illness or injury. However, it is an official document and is a part of your service record.

At left is an *unofficial* form which may be retained in your files for your personal use. It provides the same kind of information contained in DD 93-1.

As you will notice, it is a rundown of all the vital data needed in the event of serious accident or death. It provides a list of dependents, beneficiaries, and where all your important papers, such as insurance policies, marriage certificates, birth certificates and other documents are located. In short, it is a comprehensive record of all your personal affairs.

It is suggested that you keep it in a safe, yet readily available, spot. If carefully compiled and kept up to date, it will also be useful in filling out the many forms which face us all. You would be wise to let your wife or other responsible dependent know where it is kept so that it may be referred to in case of emergency.

Don't clip this page. Ask your personnel officer to have a copy of it made, preferably enlarged for you and your shipmates. Remember, nine other men want to see this too.

PacFleet's *Takelma* Earns 'E' With a Hash Mark

The fleet tug USS *Takelma* (ATF 113) has out-gunned all her bigger sisters in the Pacific Fleet Service Force to win the Force gunnery crown for the second straight year.

Takelma won the title in 1956 with a score of 89. This year, however, her eagle-eyed crew did some topnotch shooting and finished up with a score of 98, which they claim to be the highest mark ever attained in ServPac gunnery competition.

The fleet tug received a grade of "Outstanding" in every one of the gunnery exercises fired in the 1957 competition. Last year *Takelma* was the only ship in the Pacific Fleet Service Force to wear a Battle Efficiency "E" on every gun mount.

Top Air Units Get Three Major Naval Air Reserve Trophies

The three major Naval Air Reserve trophies which are awarded annually have been presented to the top Naval Air Reserve units for fiscal 1957.

For the second straight year NAS Minneapolis, Minn., was named winner of the Edwin Francis Conway Trophy. The award was made to the most proficient of the 28 Naval Air Reserve stations and training units competing for the trophy in fiscal 1957.

The trophy, one of the oldest continuous awards for aviation achievement, was donated anonymously to the Navy Department 22 years ago. It was set up to perpetuate the memory of LT Edwin Francis Conway, who was killed in an airplane crash in 1933.

The Chief of Naval Air Training Trophy, which is awarded to the unit showing the most improvement during the past fiscal year, was presented to the Naval Air Reserve Training Unit, Lakehurst, N. J.

Twelve organized Naval Air Reserve Squadrons and Units were named winners of Noel Davis Trophies. These go each year to the squadrons judged the most efficient of their types.

The Noel Davis Trophy was awarded to the Navy in 1927 by Harry Guggenheim, a former Naval Reserve aviator, in memory of LCDR Noel Davis, who was killed in an attempted trans-Atlantic flight.

Squadrons or units at the following stations received this award:

NAS Los Alamitos, Calif.—Air Wing Staff, Large, AWS-77(L); Air Ground Unit, Small, AGU-S 771; and Bureau of Aeronautics Reserve Training Unit.

NAS Minneapolis, Minn.—Fighter Squadron 811, Attack Squadron 813, Patrol Squadron 814 and Fleet Air Service Squadron (Patrol) 815.

NAS Oakland, Calif.—Air Antisubmarine Squadron 872 and Airship Patrol Squadron 871.

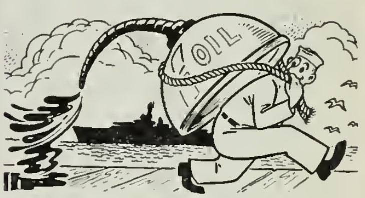
NAS New Orleans, La.—Helicopter Utility Squadron 821.

MCAS Miami, Fla.—Fleet Tactical Support Squadron 802.

NAS Atlanta, Ga.—Auxiliary Air Unit (Large) 674.

HERE'S YOUR NAVY

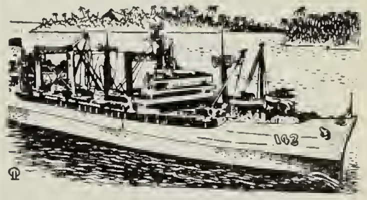
The first of a new class of Fleet oilers, USS *Neosho* (AO 143), recently became the largest ship ever to enter the Portsmouth, N. H., Naval Shipyard. She is 655 feet long, has a beam of 86 feet, draws 35 feet of water and, when fully loaded, has a displacement approximately the same as the aircraft carrier USS *Wasp* (CVA 18).



She is equipped for the rapid transfer of petroleum products and cargo to the forces afloat operating at high speed or in heavy weather. She can carry a cargo of more than 100,000 barrels of fuel oil, 48,000 barrels of aviation fuel and 8000 barrels of diesel fuel.

Neosho has had plenty of opportunity to demonstrate her design characteristics. On her shakedown cruise, after commissioning 24 Sep 1954, her first operational cruise included a stopover at Aruba, N.W.I. There she loaded for transport back to the United States one of the largest quantities of fuel oil ever carried by a Navy oiler. It's little wonder that while serving with the Sixth Fleet in the Mediterranean she broke several records in fueling speed and efficiency.

Twice she has come to the rescue of a drought-ridden area, both times in the same month. When the inhabitants on the island of Bermuda were suffering under a terrific dry spell, *Neosho* made two runs, and brought a total load of four million gallons of water.



Her defensive armament consists of automatic loading, rapid firing guns, together with the latest type of devices for their control. The latest developments in firefighting equipment are installed and her speed is considerably in excess of previous naval ships of her type.

Destroyermen Come to Aid of Grounded Freighter

When the 5000-ton Norwegian merchant freighter *Belleville* went aground off Seal Rock (near Newport, R. I.), the first ships on the scene to offer assistance were the destroyers USS *Jonas Ingram* (DD 938) and *Barry* (DD 933).

Ingram arrived shortly after the freighter's grounding but her offer of assistance was waved off because the skipper of *Belleville* didn't know the full extent of his ship's damage at that time.

Later it was determined that when she grounded on the 30-foot granite shelf, her starboard bow had been gashed open and three holds were flooded. When *Barry* made her appearance her offer to assist was accepted. A diver from the destroyer went over the side to inspect damages. His report prompted ComDesRon 20 (in *Barry*) to send over 50 men with high pressure pumps to try to get water out of the freighter. This endeavor proved fruitless however, and tugs finally took her in tow.

Nurse Corps Candidate Program Is Set Up

The Navy has set up a new program to give selected college nursing students a chance to become ensigns in the Navy Nurse Corps.

The plan calls for the annual enlistment of a number of college nursing students as they begin their senior year. These selectees will be placed on active duty in pay grade E-3 and will receive the pay of that grade, plus payments to cover such expenses as tuition, books, room and board and laboratory fees. When they receive their baccalaureate degrees in nursing they will be commissioned ensigns, Nurse Corps, USNR, and will have a two-year active duty obligation. At the time of graduation they must be between the ages of 20 and 33½.

Both this program and the present one for sending qualified Wave hospital corpsmen to civilian colleges for four-year nursing courses will now be grouped under the Navy Nurse Corps Candidate Program. Enrollees will be considered as Reserve Officer Candidates.

The program is designed to augment the present Nurse Corps procurement system of commissioning registered professional nurses directly into the Nurse Corps of the Naval Reserve.

Bluejacket Shooters Win Pistol Match

Sixteen pistol shooters representing the Pacific Fleet scored a decisive victory against San Francisco's Olympic Club in a recent .45 caliber pistol meet.

Meeting at the Alameda Naval Air Station pistol ranges in the 18th annual competition between these two teams, the Bluejacket shooters, captained by CWO Russell E. Ludwig, USN, of PhibTraPac, gained first, second and third places with their Blue, Gold and Red teams respectively.

This competition was started back in 1933 by Fleet Admiral (then commander) Chester W. Nimitz, USN. Of the 18 matches conducted since then, the Navy has won fourteen.

Fleet Admiral Nimitz was a guest at the matches and at a banquet which followed. He presented the team trophy to CWO Ludwig and the high individual score trophy to Thomas D. Elton, AO1, USN, of NAS Alameda.

Ludwig was the second highest individual scorer. The Navy Blue team fired a 2161 score while the Gold and Red teams posted 2074 and 2049 respectively.

Referee and executive officer of the match was CWO Offut Pinion, USN, the U.S. international slow fire champion of 1956 and '57.

Fond Farewell to the Fastest Ship in the Navy

USS *Reina Mercedes* (IX 25), famous water-based landmark at the Naval Academy, is finally coming to the end of her career. The former Spanish man-o-war officially completed her 45-year tour of duty at Annapolis in November.

Her passing also marks the end of an era at the Academy. Since 1912, when she replaced USS *Hartford,* she served as Station Ship continuously except for brief periods of overhaul. Until her decommissioning, she also served as headquarters for sailing activities, the Harbor Control Center, and as quarters for the commanding officer of the naval station.

One factor which led to her decommissioning at the present time was the necessity to move her because of the land-fill project now underway at the Academy.

As countless midshipmen learned the hard way, she was designated as "the fastest ship in the Navy," because she had been fast to her moorings for so long.

Course in Management of Officers Messes, EM Clubs

Officers newly-commissioned through NROTC or OCS, who hold degrees in hotel and restaurant management, are being offered a chance to continue studies along that line at the BuPers Mess Management Training Facility, NAS, Patuxent River, Md. Upon completing a two-month course at the facility they will be assigned to large shore activities as treasurers of closed messes and, in most cases, will perform collateral duties advising and assisting the management of open messes or EM clubs.

The new facility was established 1 Jul 1957 to provide technical assistance in the operation and management of officers messes and EM clubs. Its course for mess treasurers includes on-the-job training and instruction in five subjects—Accounting for Navy Messes; Food and Beverage Cost Control; Purchasing of Merchandise and Furnishings; Division Officer for Stewards, and Menu Planning.

BOOKS: THIS MONTH'S SELECTIONS ARE OUT OF THIS WORLD

THE STORY OF VANGUARD and the Navy's role in IGY can't be told in a mere 64 pages. On the assumption that you will want to know more about the famous rocket and more about space travel, we've asked the Library Services Branch to tell us about the books available at your ship or station library which will give you a more complete picture. You'll find a further rundown on books about missiles themselves on page 56 of the March 1957 issue of ALL HANDS.

Rockets Through Space, by Lester Del Ray, for example, explains why the idea of penetrating the great void of space is no longer a wild dream. *Rockets,* says the publisher, is not a science-fiction book. It deals with science facts. It tells you what we already know about the realms of the Earth's atmosphere and, through the eyes of the author, you will be enabled to examine the inside of a future rocket ship. You will also learn about the principles of jet propulsion; how men will live where there is no gravity; what dangers they will face.

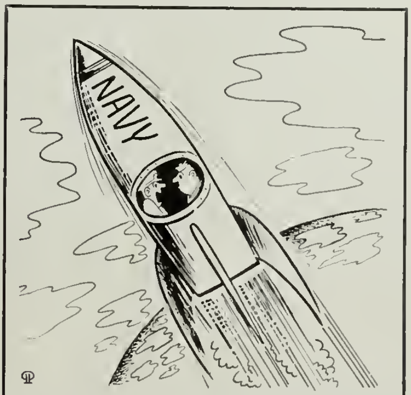
Rockets Through Space is primarily concerned with the rockets and space travel of the future; G. Harry Stine, author of ***Rocket Power and Space Flight,*** and of ***Earth Satellites,*** is more interested in answering questions raised by our present-day venture into the wild black wonder. Connected with the Planning Branch of the Integrated Range Mission and busy with advanced long-range planning for electronic trajectory systems, Dr. Stine has received thousands of letters from rocket enthusiasts who want to know more about the world around them. *Rocket Power* is an attempt to answer the key questions his correspondents have raised. Interspersed with these answers are stories and experiences the author has picked up at White Sands Proving Grounds. They all add up to the fact that rocketeers are also human beings.

Earth Satellites, in a pocketbook format, discusses that crucial development of the 20th Century—man's assault on outer space. Up-to-date reading for anyone who wants to know what the future may hold for himself and our country. Dr. Stine has written many books—fiction and non-fiction—on rockets and space travel.

Another pocket-book, ***Satellite,*** by Erik Bergaust and William Beller, tells in a highly readable manner what the successful launching of an earth satellite means to the United States and to the world. The authors follow the familiar theme that launching an earth satellite is the first step toward space travel, which they predict will come about after a manned satellite is successfully launched. They state that the first trip to the moon will take off from the manned satellite, and from the moon, man will eventually travel to the rest of the solar system and then to the stars. Certainly a timely book.

To get back to hard facts and hard covers, in ***The Realities of Space Travel,*** edited by L. J. Carter, sixteen experts present the known facts about travel in outer space, outline the problems still confronting man, and tell how these are slowly being solved. Most of the field of space travel is covered: leaving the Earth and its atmosphere, combating gravity, the artificial satellite, the chemical and the atom rockets, history of rocket development, interplanetary flights, the dangers to be overcome and, appropriately enough, human limitations. The articles contained in the book all originated as papers presented to The British Interplanetary Society. Somewhat technical.

The last word on the subject may be found in ***The Space Encyclopedia;*** subtitled "A Guide to Astronomy and Space Research." So far as the usual layman can determine, it seems to be as comprehensive a volume as can be expected, with subjects ranging from "aberration of light" to "zodiacal light" and from extragalactic nebulae to the development of rocket motors. However, as explained in the preface, "no matter by how little or for how short a time, celestial mechanics and the astronomy of the solar system are united naturally with electronic and mechanical engineering; but the exploration of space would be of narrow significance if we did not look beyond our local adventure for some understanding of the universe as a whole." This has been the guiding idea in the compilation of *Space Encyclopedia.*



"You forgot to get an out of bounds pass!"

The editors of "The Scientific American" bring us down to earth with their offering ***The Planet Earth.*** Based upon the International Geophysical Year, the book discusses the origin of the earth, the lithosphere, the lithosphere's crust, hydrosphere, atmosphere, and the edge of space. The book is addressed primarily to those of us who are not scientists and is the product of a collaboration between the scientists who wrote the 14 chapters and the editors of the magazine. Combined, they go far to prove that, no matter how technical the subject, good writing can make it interesting.

Now for a change of pace.

Warm Bodies by Donald R. Morris is a bit of light reading which will bring chuckles to Navymen everywhere. This piece of fiction takes place aboard an Atlantic Fleet LST and is told in the first person by the ship's executive officer, a bachelor LTJG.

As the cast of characters unfolds you will recognize many of them as being shipmates aboard your ship. Morris showed a remarkable insight in his assignment of personalities to the secondary figures that march through the novel. Lightly woven through the chapters is the story line concerning the romance of the exec with a bright young southern girl from Little Hominy, N. C. (Little Hominy is just on the other side of Big Hominy.) As this romance progresses toward the logical conclusion, Morris has woven stories about the ship's activities and those of the crew. The book tells of Screaming Eagle, a full-blooded Indian, who would rather write home to his oil rich father for money than stand in the pay line, and of the ship's captain, who loves to fish, but only succeeds in spearing a junior officer.

TAFFRAIL TALK

On looking over the page proofs of the Vanguard Project issue, we couldn't help but feel that our vivid descriptions might impel some of our readers who are also do-it-yourselfers to whip up a small satellite of their very own.

Very well. Not the ones to inhibit the egos of our readers, we append herewith a useful little formula we came across during our research. It tells you how to figure the distance of your satellite above the earth. How you get it up there is your own problem. We quote this "simple computation" given by a mathematician of the Underwater Sound Laboratory, New London, Conn.

"Equating the centripetal force necessary to keep the satellite in a circular orbit to the gravitational force between the earth and the satellite yields the following equation:

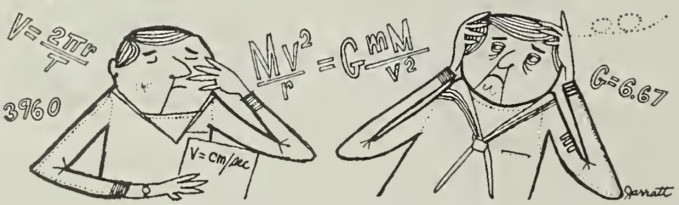
$$\frac{Mv^2}{r} = G\,\frac{mM}{r^2}$$

where

m = mass of satellite in grams
M = mass of earth in grams = 5.983×10^{27} grams
G = gravitational constant = 6.67×10^{-8}
r = distance between centers of earth and satellite in centimeters
v = linear velocity of the satellite in cm/sec.

Introducing $v = \dfrac{2\pi r}{T}$, where T = period in seconds, the equation is then solved for r, which comes out in centimeters. This value is converted to statute miles. The mean radius of the earth of about 3960 miles is then subtracted."

If there is any error in this computation, we're sure you'll let us know.



A further word of advice: After you achieve success in your modest little endeavor, you may aspire to greater things that will give you a bigger bang. It is strongly recommended that you do NOT (repeat NOT) put to practical application Einstein's well-known formular, $E = mc^2$. The neighbors might object.

★ ★ ★

Showing definite signs of satellite fatigue, our Editor-in-Charge-of-Doggerel-and-Misc.-Matters staggered in at the last minute with *his* contribution to the Vanguard issue. Again, we quote:

Tell me, oh captain
In the future that you see.
What the uniform of the day
On the moon will be.

The All Hands Staff

The United States Navy

Guardian of Our Country

The United States Navy is responsible for maintaining control of the sea and is a ready force on watch at home and overseas, capable of strong action to preserve the peace or of instant offensive action to win in war.

It is upon the maintenance of this control that our country's glorious future depends. The United States Navy exists to make it so.

We Serve with Honor

Tradition, valor and victory are the Navy's heritage from the past. To these may be added dedication, discipline and vigilance as the watchwords of the present and future.

At home or on distant stations, we serve with pride, confident in the respect of our country, our shipmates, and our families.

Our responsibilities sober us; our adversities strengthen us.

Service to God and Country is our special privilege. We serve with honor.

The Future of the Navy

The Navy will always employ new weapons, new techniques and greater power to protect and defend the United States on the sea, under the sea, and in the air.

Now and in the future, control of the sea gives the United States her greatest advantage for the maintenance of peace and for victory in war. Mobility, surprise, dispersal and offensive power are the keynotes of the new Navy. The roots of the Navy lie in a strong belief in the future, in continued dedication to our tasks, and in reflection on our heritage from the past. Never have our opportunities and our responsibilities been greater.

ALL HANDS the Bureau of Naval Personnel Information Bulletin, with approval of the Bureau of the Budget on 23 June 1955, is published monthly by the Bureau of Naval Personnel for the information and interest of the naval service as a whole. Opinions expressed are not necessarily those of the Navy Department. Reference to regulations, orders and directions is for information and does not by publication herein constitute authority for action. All original material may be reprinted as desired if proper credit is given ALL HANDS. Original articles of general interest may be forwarded to the Editor.

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The Bureau should be kept informed of changes in the number of copies required.

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• AT RIGHT: LOOKING UP—A Naval Observatory telescope searching for more information about far away places in the land of stars took this photo of Orion Nebula. ➧

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